

EXHIBIT A

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SALESFORCE.COM, INC.
Petitioner

v.

WSOU INVESTMENTS, LLC d/b/a
BRAZOS LICENSING AND DEVELOPMENT
Patent Owner

U.S. Patent No. 8,209,411

“System, Method And Computer Program Product For
Providing Content To A Terminal”

Inter Partes Review No. 2022-00357

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 8,209,411
UNDER 35 U.S.C. §§ 311-319 AND 37 C.F.R. §§ 42.100 *et seq.*

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LIST OF EXHIBITS

Exhibit	Description
Ex. 1001	U.S. Patent No. 8,209,411 (“the ’411 patent”)
Ex. 1002	File History of U.S. Patent No. 8,209,411 (U.S. Patent Application No. 12/506,642)
Ex. 1003	Declaration of Dr. Douglas C. Schmidt (“Schmidt”)
Ex. 1004	Curriculum Vitae of Dr. Douglas C. Schmidt
Ex. 1005	G. C. Fox, S. Ko, K. Kim, S. Oh, and Lee, S., “Integration of Hand-Held Devices into Collaborative Environments”, to appear in the proceedings of the 2002 International Conference on Internet Computing (IC-02). June 24-27 Las Vegas., Accessed from http://grids.ucs.indiana.edu/ptliupages/publications/pdagarnetv1.pdf (“Fox”)
Ex. 1006	<i>Java Message Service</i> by Monson-Haefel and Chappell
Ex. 1007	Parties’ Preliminary Claim Constructions
Ex. 1008	Scheduling Order: 6-20-cv-01164
Ex. 1009	Email with Mr. Gunnell Regarding Case Schedule
Ex. 1010	Email with Mr. Gunnell Regarding Case Schedule
Ex. 1011	WSOU Summons: 6:20-cv-01164
Ex. 1012	Return of Service: 6:20-cv-01164
Ex. 1013	Order on Claim Construction: 6-20-cv-01164
Ex. 1014	Consolidated Trial Practice Guide
Ex. 1015	WSOU’s Complaint for Patent Infringement 6:20-cv-1164
Ex. 1016	Declaration of Dr. Sylvia Hall-Ellis

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LIST OF CHALLENGED CLAIMS

Claim	Limitation
1.P	A method comprising:
1.1	interfacing, via a messaging gateway, a first network environment and a second network environment
1.2	to receive, from the first network environment, content and addressing information associated with an apparatus within the second network environment
1.3	wherein the content is reformatted in a vectorized format; and
1.4	determining to generate a signal specifying access information to access the content.
2	A method of claim 1, further comprising: determining to transmit the content to the apparatus in response to a request from the apparatus, the request being generated in response to the signaling.
3	A method of claim 1, wherein the content is in a scalable vector graphics (SVG) format.
4	A method of claim 1, further comprising: determining to reformat the content into another vectorized format supported by the apparatus for transmitting the reformatted content to the apparatus.
5	A method of claim 4, further comprising: receiving either a text message, a source identification, or a combination thereof; and determining to append the reformatted content to the text message, the source identification, or the combination thereof, for transmission to the apparatus.
6	A method of claim 1, wherein the addressing information includes either a mobile telephone number, a session initiation protocol (SIP) address, or a combination thereof.
7	A method according to claim 6, wherein the signaling is in compliance with a short messaging service (SMS), or a session initiation protocol (SIP).
8	A method of claim 1, further comprising: determining to authenticate the apparatus based, at least in part, upon the addressing information of the apparatus.
9	A method of claim 8, wherein the apparatus is authenticated based, at least in part, upon an international mobile equipment

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Claim	Limitation
	identification code associated with the apparatus, a session authentication key transferred to the apparatus during the signaling, or a combination thereof.
10.P	An apparatus comprising:
10.1	at least one processor; and
10.2	at least one memory including computer program code for one or more programs,
10.3	the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to perform at least the following,
10.4	interface, via a messaging gateway, a first network environment and a second network environment
10.5	to receive, from the first network environment, content and addressing information associated with an apparatus associated within the second network environment,
10.6	wherein the content is reformatted in a vectorized format; and
10.7	determine to generate a signal specifying access information to access the content.
11	An apparatus of claim 10, wherein the apparatus is further caused to: determine to transmit the content to the apparatus in response to a request from the apparatus, the request being generated in response to the signaling.
12	An apparatus of claim 10, wherein the content is in a scalable vector graphics (SVG) format.
13	An apparatus of claim 10, wherein the apparatus is further caused to: determine to reformat the content into another vectorized format supported by the apparatus, for transmitting the reformatted content to the apparatus.
14	An apparatus of claim 13, wherein the apparatus is further caused to: receive either a text message, a source identification, or a combination thereof; and determine to append the reformatted content to the text message, the source identification, or the combination thereof, for transmission to the apparatus.
15	An apparatus of claim 10, wherein the addressing information

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Claim	Limitation
	includes either a mobile telephone number, a session initiation protocol (SIP) address, or a combination thereof.
16	An apparatus according to claim 15, wherein the signaling is in compliance with a short messaging service (SMS), or a session initiation protocol (SIP).
17	An apparatus of claim 10, wherein the apparatus is further caused to: determine to authenticate the apparatus based, at least in part, upon the addressing information of the apparatus.
18.P	A computer-readable storage medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following steps:
18.1	interfacing, via a messaging gateway, a first network environment and a second network environment
18.2	to receive, from the first network environment, content and addressing information associated with an apparatus within the second network environment,
18.3	wherein the content is reformatted in a vectorized format; and
18.4	determining to generate a signal specifying access information to access the content.
19	A computer-readable storage medium of claim 18, wherein the apparatus is caused to further perform: determining to transmit the content to the apparatus in response to a request from the apparatus, the request being generated in response to the signaling.
20	A computer-readable storage medium of claim 18, wherein the content is in a scalable vector graphics (SVG) format.

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I. INTRODUCTION

Patent Owner WSOU Investments, LLC D/B/A Brazos Licensing and Development (“WSOU”) is a non-practicing entity, and states that it is based in Waco, Texas. WSOU recently sued Petitioner Salesforce simultaneously filing nine other litigations alleging infringement of nine separate patents. All of these patents stem from different patent families.

One of those ten patents, U.S. Patent No. 8,209,411 (“’411 patent”) is the subject of the present Petition. The ’411 patent is directed to sending converted files from a desktop environment to a mobile terminal such as a mobile phone. The ’411 patent does not purport to claim any new or improved file-conversion systems or methods for converting a file from one format to another. Nor does it purport to claim any new communication protocol, relying instead on what the patent admits are pre-existing standards such as the SVG (scalar vector graphics) format and derivatives of SVG (e.g., Mobile SVG, SVG-Tiny, SVG-Basic). Instead, the ’411 patent effectively seeks to cover a broad and straightforward messaging gateway architecture for routing a converted file to a mobile terminal. As will be demonstrated below, this technique, as well as all of the various features of the dependent claims, were well-understood and thoroughly discussed in the prior art.

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Accordingly, Petitioner salesforce.com, Inc. (“Salesforce” or “Petitioner”) respectfully requests *Inter Partes* review of claims 1–20 (“the challenged claims”) of the ’411 patent assigned to WSOU Investments, LLC (“Patent Owner” or “WSOU”), pursuant to 35 U.S.C. § 311 and 37 C.F.R. § 42.100.

II. MANDATORY NOTICES

Pursuant to 37 C.F.R. § 42.8(a)(1), the following mandatory notices are provided as part of this Petition.

A. Real Party-in-Interest (37 C.F.R. § 42.8(b)(1))

The real party-in-interest for Petitioner is salesforce.com, Inc.

B. Related Matters (37 C.F.R. § 42.8(b)(2))

1. Related Patent Office Proceedings

There are no related Patent Office proceedings.

2. Related Litigation

WSOU is currently asserting the ’411 patent against Petitioner in *WSOU Investments, LLC d/b/a Brazos Licensing and Development v. Salesforce.com, Inc.*, Case No. 6:20-cv-1164-ADA (W.D. Tex.) (the “District Court litigation” or “the litigation”).

C. Lead and Backup Counsel and Service Information (37 C.F.R. §§ 42.8(b)(3)–(4))

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Petitioner provides the following counsel and service information.¹ Pursuant to 37 C.F.R. § 42.10(b), a Power of Attorney accompanies this Petition.

LEAD COUNSEL	BACKUP COUNSEL
James Glass Reg. No. 46729 jimglass@quinnemanuel.com Quinn Emanuel Urquhart & Sullivan, LLP 51 Madison Ave., 22nd Floor New York, NY 10010 Tel: (212) 849-7000	Ray Zado (<i>pro hac vice</i> to be requested upon grant authorization) rayzado@quinnemanuel.com Quinn Emanuel Urquhart & Sullivan, LLP 555 Twin Dolphin Dr., 5th Floor Redwood Shores, CA 94065 Tel: (650) 801-5000 Sam Stake (<i>pro hac vice</i> to be requested upon grant authorization) samstake@quinnemanuel.com Quinn Emanuel Urquhart & Sullivan, LLP 50 California St., 22nd Floor San Francisco, CA 94111 Tel: (415) 875-6600 Jared Kneitel Reg. No. 51178 jaredkneitel@quinnemanuel.com Quinn Emanuel Urquhart & Sullivan, LLP

¹ Petitioner consents to electronic service to qewsouvsalesforce@quinnemanuel.com and the email addresses listed in the table below.

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	1109 First Ave., Suite 210 Seattle, WA 98101 Tel: (206) 905-7000
--	--

Petitioner consents to electronic service at the email addresses listed above.

D. Payment of Fees (37 C.F.R. § 42.15(a))

The undersigned authorizes the Office to charge the fee required for this Petition for *Inter Partes* Review to Deposit Account No. 50-5708. Any additional fees that might be due are also authorized.

III. REQUIREMENTS FOR INTER PARTES REVIEW

Petitioner certifies it is not barred or estopped from requesting this proceeding, the '411 patent is available for *Inter Partes* review, and the prohibitions of 35 U.S.C. §§315(a)-(b) are inapplicable.

IV. STATEMENT OF RELIEF REQUESTED FOR EACH CHALLENGED CLAIM

Petitioner respectfully requests that *Inter Partes* review of the challenged claims based on the following obviousness ground:

#	Ground for Challenge
1	Claims 1-20 are obvious in view of Fox and the Java Message Service
2	Claims 1-7, 10-16, and 18-20 are obvious in view of Fox
3	Claims 8, 9, and 17 are obvious in view of Fox and the Java Message Service

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V. OVERVIEW OF THE '411 PATENT

A. Technology

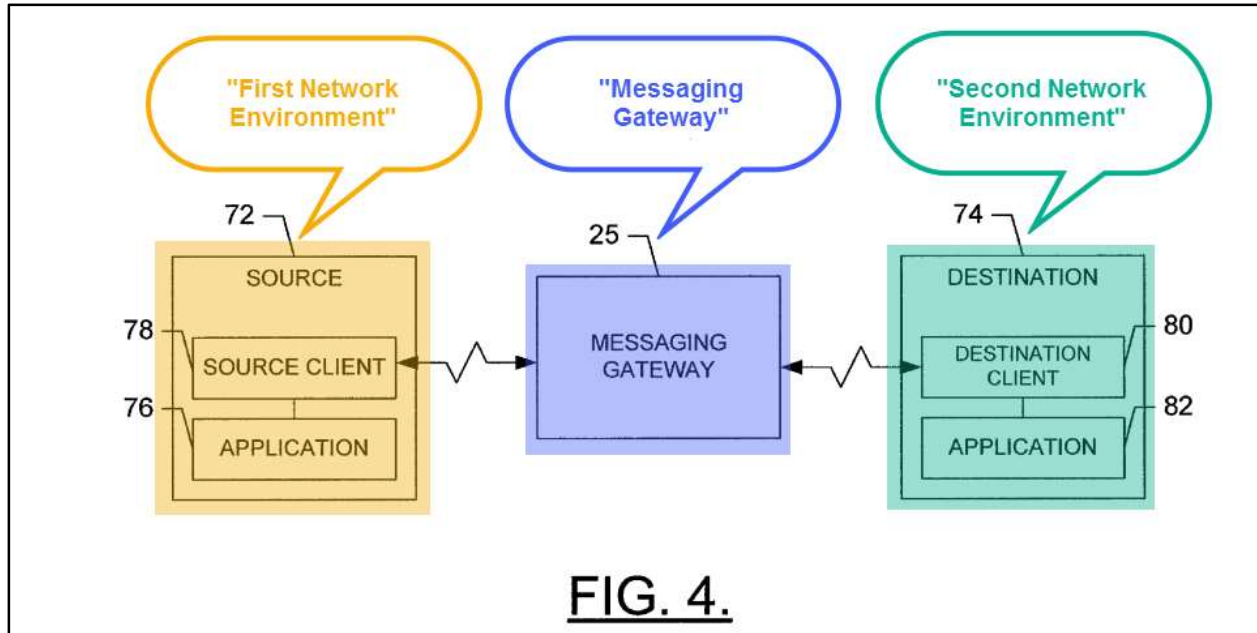
The '411 patent is directed to “systems and methods of providing content to a terminal having a limited display area for presenting such content.” Ex. 1001, 1:17–19. As stated in the '411 specification, mobile devices of the time (such as “internet-enabled mobile phones” and “PocketPC and palm-based computers”) lacked the “storage capacity, memory, bandwidth, and [] large ... display” required to download and display e-mail attachments (e.g., “normal application files—such as PowerPoint files, images, etc.”). *Id.*, 1:58–65, 2:10–13, 17–19, 38–40. Instead, these devices of the time purportedly would “render [such content] in an extremely slow and/or inconvenient manner,” *id.*, 9:44–45, for example, breaking up “large source documents into smaller parts because transmitting long documents at once over slow wireless networks can try the patience of users,” *id.*, 2:40–43. Ex. 1003, Declaration of Dr. Schmidt (hereinafter “Schmidt”) at ¶28.

To address this problem, the '411 patent describes systems and methods for reformatting mobile content, before delivery, into a well-known “vectorized” format (which were prevalent in the prior art at the time), such as Scalar Vector Graphics (“SVG”). *Id.*, 10:21–30. More particularly, to implement the described methods of delivering such reformatted content, the '411 patent further discloses use of a “messaging gateway” to deliver this reformatted content from a first

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network environment to an apparatus in a second network environment. *Id.*, 3:40-46. As illustrated in Figure 4 below, the messaging gateway is situated between the source in a first networking environment and the destination in a second networking environment. The messaging gateway receives, from the source, vectorized content intended for a mobile device, and then provides that content to the destination client for rendering and display. *Id.*, 10:12-34; 35-41. Schmidt ¶29.



In addition to the reformatted content, a destination address of the mobile device for which the reformatted content is destined is sent to the messaging gateway. *Id.*, 10:55-63. Schmidt ¶30.

B. Priority Date

Because the prior art cited in this Petition predates the earliest possible

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priority date of the '411 patent (June 4, 2004), each cited reference herein qualifies as prior art under at least one of pre-AIA 35 U.S.C. 102(a), (b), and/or (e). Schmidt ¶31.

C. Prosecution History

On April 20, 2011, the Examiner issued a Non-Final rejection rejecting claims 1-20 (claims 2-21 during prosecution) as being unpatentable over U.S. Patent No. 7,210,099 ("Rohrbaugh") in view of U.S. Patent Publication No. 2004/0048602 ("Tamura"). Ex. 1002 (FH at April 20, 2011 Office Action at page 2). The Examiner rejected the independent claims on the basis that Rohrbaugh discloses each limitation of the independent claims except for "determining to generate a signal specifying access information to access the content." The Examiner combined Rohrbaugh with Tamura to satisfy this limitation.

In response to this rejection, the applicant amended the independent claims to clarify that content and addressing information associated with the apparatus within the second network environment is received from the first network environment. Ex. 1002 (FH at July 20, 2011 Response to Office Action at page 2).

During prosecution, the Examiner also recognized the apparent ambiguity in the claim language and the intrinsic record, issuing a rejection under 35 U.S.C. § 112 of pending claims 2-10 (issued claims 1-9) as indefinite, on the grounds that

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“[i]t is unclear as to what causes the determining step to generate a signal specifying the access information to access the content.” Ex. 1002 (FH at October 14, 2011 Office Action at page 2). Subsequently, during a telephonic interview with the Examiner, the Applicant made arguments to overcome this rejection that addressed the Examiner’s finding of a lack of clarity as to what was performing the determining step. *See* Ex. 1002 (FH at February 14, 2012 Amendment and Remarks at page 7).

Also in the October 14, 2011 Office Action, the Examiner issued a non-statutory double-patenting rejection based on U.S. Patent No. 7,584,244. Responsive thereto, the applicant filed a terminal disclaimer. A Notice of Allowance was then issued.

VI. PERSON OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art (“POSITA”) relating to the subject matter of the ’411 patent is a person with a Bachelor of Science degree in computer science, or a related subject matter, plus at least two years of professional experience in the field of computer networks, wireless communications, or a similar field. This level of skill is approximate, and more experience would compensate for less formal education, and vice versa. Schmidt ¶¶32-34.

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VII. CLAIM CONSTRUCTION

The claim construction process has begun in the litigation – the parties have exchanged proposed constructions (Ex. 1007) and a *Markman* hearing was held on December 15, 2021. The only disputed term was “messaging gateway” (independent claims 1, 10, and 18). The District Court issued a ruling that “messaging gateway” is to be accorded a “plain and ordinary” meaning. Ex. 1013 (Transcript of December 15, 2021 Hearing at 32:15-17). This ruling, however, does not impact this petition, as the prior art renders the claims unpatentable under either Petitioner’s or Patent Owner’s construction proposed in the litigation. Petitioner presents this construction pursuant to the Trial Practice Guide’s requirement that “[p]arties should submit a prior claim construction determination by a federal court or the ITC in an AIA proceeding as soon as that determination is available.” Ex. 1014 at 47. Schmidt ¶35.

Petitioner proposed that this term be construed as “a device or program to connect disparate computer network environments and deliver content from the first network environment to a specific apparatus in the second network environment.” Patent Owner proposed the plain and ordinary meaning without more explanation. Schmidt ¶35.

Notwithstanding the District Court’s ruling, Petitioner believes its proposed construction provided in Exhibit 1007 for “messaging gateway” is correct (“a

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device or program to connect disparate computer network environments and deliver content from the first network environment to a specific apparatus in the second network environment”). Petitioner’s proposed construction of “messaging gateway” reflects the intrinsic record. Ex. 1001 at 2:47-52 (“embodiments of the present invention provide an improved system, method and computer program product for providing content *from a fixed network*, typically, personal computer (PC), environment *to a destination*, such as a mobile terminal, *operating in a different network and computing platform*”). In addition, as described above, during prosecution applicant amended the independent claims such that the content and addressing information associated with the apparatus within the second network environment is received from the first network environment (Ex. 1002; FH at July 20, 2011 Response to Office Action at page 2), requiring that the first and second network environments be disparate. Moreover, Petitioner’s construction of “messaging gateway” is a device or program that delivers received content to a *specific apparatus* in the second network environment, as opposed to multiple apparatuses. Schmidt ¶¶35-36.

In contrast, Patent Owner argued that the first network environment and the second network environment may be the same. However, this proposed construction ignores the plain and ordinary meaning of the words of the claim and violates well-known principles of claim construction. *See, e.g., Hill-Rom Servs.,*

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Inc. v. Matal, 716 F. App'x 996, 1001 (Fed. Cir. 2017) (in the absence of any evidence to the contrary, different terms in the claims connote different meanings). Moreover, PO's proposed interpretation of this phrase allows messages to be sent to any number of apparatuses within the second network, without being tied to a specific device. Schmidt ¶¶35-36.

Notwithstanding the District Court's ruling, Petitioner maintains that its proposed construction is the correct interpretation, as it most naturally aligns with the intrinsic evidence. As it pertains to this Petition, resolution of this issue is not necessary to conclude that the challenged claims are unpatentable. The claims are unpatentable under both Petitioner's interpretation and PO's broader interpretation. Schmidt ¶¶36-37.

VIII. THE PRIOR ART

A. The State of the Art

All of the underlying technologies of the '411 patent claims were well-known to a POSITA. Schmidt ¶39.

B. Messaging Gateways

A messaging gateway is a computing system comprising hardware and/or software that implements an architectural pattern where messages in one messaging protocol are automatically converted to messages in another messaging protocol. By applying this approach, only the messaging gateway code knows

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about the messaging system, whereas the rest of the application code does not, thereby simplifying the design and implementation of the application code. *See*, e.g., *Enterprise Integration Patterns: Designing, Building, and Deploying Messaging Solutions* by Gregor Hohpe and Bobby Woolf, 1st edition (October 10, 2003); Schmidt ¶40.

C. Vectorizing Content

Vectorizing content are computer graphics images that are defined in terms of points on a Cartesian plane. These points are connected by lines and curves to form polygons and other graphical shapes. *See*, e.g., *Scalable Vector Graphics SVG 1.0 Specification* (November 1, 2000); Schmidt ¶41.

D. Publish/Subscribe Messaging Services

Publish/subscribe messaging services are hardware and/or software that implement an architectural pattern where publishers of messages do not send the messages directly to specific subscribers, but instead reply on some type of message broker that relays messages from the publisher to the subscribers, without the publishers having knowledge of which subscribers, if any, there are. Similarly, subscribers express their interest(s) with the message broker only receive messages that are of interest, without subscribers having knowledge of which publishers, if any, there are. *See*, e.g., Ex. 1006, *Java Message Service*, Chapter 4. *Publish-and-Subscribe Messaging*; Schmidt ¶42.

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E. Point-to-Point Messaging Services

Point-to-point messaging services are hardware and/or software that implement an architectural pattern based on the concepts of message queues, senders, and receivers. Each message transmitted by a sender is addressed to a specific queue that is established to hold such messages. A receiver can extract messages from a specified queue and process these messages as it sees fit. Queues retain all messages transmitted to them via a sender until the messages are consumed by the receiver or until the messages expire. *See, e.g., Ex. 1006, Java Message Service, Chapter 5. Point-to-Point Messaging; Schmidt ¶43.*

F. Summary of Integration of Hand-Held Devices Into Collaborative Environments (Fox, Ex. 1005²)

Fox, Ex. 1005,³ discloses a messaging gateway (e.g., PDA adaptor) that “sits between mobile clients and [PC clients] and does user management, message mapping, connection management, and message optimization based on the user and device

² Hereinafter “Fox.”

³ Fox, Ex. 1005, was a printed publication that was publicly available at least as early as September 5, 2003, such that a POSITA, exercising reasonable diligence, could have located it. Moreover, the attached Ex. 1005 is a true and authentic copy as it existed on such date. This is supported by the attached declaration of Dr. Hall-Ellis, Ex. 1016.

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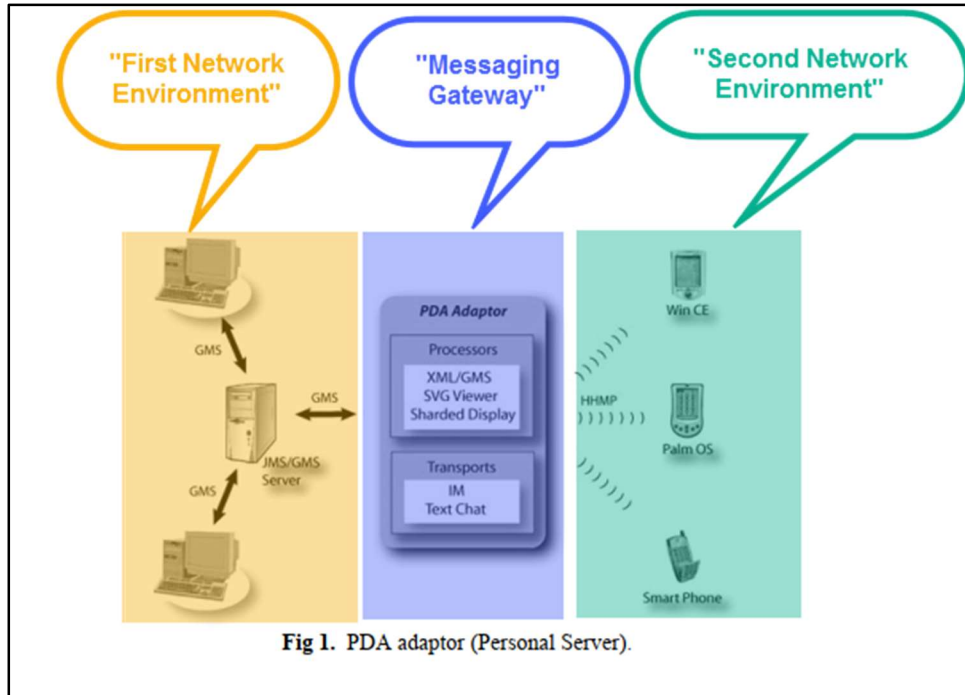
specification.” Fox at 2. Fox discloses customizing the content sent to the mobile client depending on client specifications by keeping user profile information and mobile device profile information, such as screen size and the device type in the PDA adaptor. Fox at 3; Schmidt ¶44.

Fox describes a modification to the Garnet Collaboration system (also called the Garnet Message Service or “GMS”) to support distance education, collaborative computing and building electronic communities. Generally, the Garnet Collaboration system integrated synchronous and asynchronous collaboration for computing devices to interact with each other. Fox was built on the Java Message Service as the industry standard for publish/subscribe systems and supported universal access including PDAs collaborating with desktop computing devices. Fox at 1; Schmidt ¶45.

Fox’s modification to the Garnet Message Service – the Garnet Message Service Micro Edition (GMSME) – allows for hand-held devices, mobile phones, as well as conventional desktops to join in one collaboration session. Because the Garnet Message Service could not support lightweight clients such as PDAs (because of their smaller displays and slower processors), the universal collaboration and access architecture of the Garnet Message Service Micro Edition (GMSME) was proposed to support these types of clients. Fox at 1; Schmidt ¶46.

Fox’s system is shown generally in connection with Fig. 1. Schmidt ¶47.

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Fox also discloses the translation of content into vector files for distribution of that vectorized content to mobile devices. *See, e.g.*, Fox at 6; Schmidt ¶48.

G. Summary of Java Message Service (Ex. 1006⁴)

The Garnet Message Service Micro Edition (GMSME) of Fox is built on the Java Message Service ("JMS"), Ex. 1006.⁵ As of 2001, the JMS was the *de facto*

⁴ Hereinafter "JMS."

⁵ JMS, Ex. 1006, was a printed publication that was publicly available at least as early as June 18, 2001, such that a POSITA, exercising reasonable diligence, could have located it. Moreover, the attached Ex. 1006 is a true and authentic copy as it existed on such date. This is supported by the attached declaration of Dr. Hall-Ellis, Ex. 1016.

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industry standard application programming interface (API) for message-oriented middleware used to facilitate the sending and receiving of messages between software systems. Schmidt ¶49.

The JMS describes two models to send messages from a sending device to a receiving device: publish/subscribe⁶ and point-to-point.⁷ These two models are based on the same message header information and, depending on the use case, a user may decide to send a message from a sending device to a receiving device using either model. The point-to-point model is referred to in Ground 1 in connection with sending content to a specific apparatus in the second network environment. Schmidt ¶50.

In addition to describing models for sending messages between devices, the JMS, among other things, describes the authentication of client devices to give clients permission to send and receive messages (claims 8, 9, 17; Grounds 1 and 3).

⁶ In publish/subscribe messaging, a sending device broadcasts a message with a topic. Devices that are subscribed to that topic are “listening” for messages broadcast with that topic and will receive those messages. Schmidt ¶50.

⁷ In point-to-point messaging, the addressing information of the destination is explicitly known to the sender and that addressing information is sent by the sender along with the message content. Schmidt ¶50.

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Schmidt ¶51.

IX. INSTITUTING THIS IPR WOULD BE EQUITABLE

A. *NHK-Fintiv* Factors Support Institution

The Board balances six factors in considering denial under 35 U.S.C. §314(a). Here, the weight of these factors strongly favors institution. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”).

1. Overlap Between Issues Raised in the Petition and in the Parallel Proceeding

There will be no overlap between this Proceeding and the litigation, as Petitioner stipulates that, if this IPR proceeding is instituted, Petitioner will not pursue in the litigation the grounds raised here, or that could have reasonably been raised (i.e., any ground that could be raised under §§ 102 or 103 on the basis of prior art patents or printed publications). This waiver is intended to be commensurate in scope with the estoppel provisions of 35 U.S.C. §315(e)(2).

The PTAB has found this kind of stipulation “mitigates any concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions.” *Sotera v. Masimo Wireless*, IPR2020-01019, Paper 12 at 19 (PTAB December 1, 2020) (Precedential as to §II.A). As such “this factor weighs strongly in favor of not exercising discretion to deny institution.”

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Id.; accord *Sand Revolution II, LLC v. Cont'l Intermodal Group – Trucking LLC*,

IPR2019-01393, Paper 24 at 12 FN 5 (PTAB June 16, 2020) (informative).

Moreover, and in addition to this waiver, there are additional issues addressed in this Petition that are not addressed in the litigation. This Petition challenges nine more claims than at issue in the Litigation. This Petition challenges twenty claims (1-20) whereas only claims 1, 3, 6-8, 10, 12, 15-18, and 20 are at issue in the litigation. The additional claims in this Petition implicate issues not raised in the District Court including the signaling between the messaging gateway and a mobile device (e.g., text message, session initiation protocol, and short message service whereas the signaling in the District Court litigation is limited to email and SMS), reformatting already reformatted content (not applicable in the District Court litigation), and authentication of messages between the messaging gateway and the mobile device (also not applicable in the District Court litigation).

2. Likelihood of a Stay

Neither party has requested a stay in the parallel litigation. Typically, a district court stay of a litigation pending resolution of the PTAB trial allays concerns about inefficiency and duplication of efforts. However, here those concerns are alleviated by the above stipulation, which confirms that the PTAB – and the alone – will address invalidity under §§ 102 and 103 based on patents and

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printed publications. This ensures that IPR is a “true alternative” to the district court proceeding. *Sand Revolution*, IPR2019-01393, Paper 24 at 7.

This factor thus weighs in favor of institution or is at least neutral.

3. Proximity of the Court’s Trial Date to a FWD

The District Court entered a Scheduling Order on November 29, 2021 (Exhibit 1008) governing the ten patent disputes filed by WSOU. Previously, the District Court ordered that the ten patent disputes be split up into three groups with the first group being scheduled for trial on December 5, 2022. Ex. 1009. Trial for the second and third groups are set for February 6, 2023 and March 6, 2023, respectively. The parties have not yet determined which group the ’411 Patent will be a part of nor the trial date for the ’411 Patent. The parties are to propose to the District Court, by July 8, 2022, the proposed groupings for trial. Ex. 1010.

Petitioner notes, however, that even in cases where trial is earlier than an expected final written decision, the Board should seek “to balance considerations such as system efficiency, fairness, and patent quality.” *Fintiv*, IPR2020-00019, Paper 11 at 5 (collecting cases). Here, that balance weighs in favor of institution, as, even if trial occurs before a final written decision, Petitioner has filed a broad *Fintiv* waiver that ensures this forum will be the only one to consider patentability based on § 102/103 printed publications.

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4. Investment in the Parallel Proceeding

Investment in the parallel proceeding has been minimal. WSOU did not serve the complaint until February 24, 2021. Ex 1011, Ex. 1012.

At this point, the District Court has invested virtually no time in assessing the parties' claims and defenses—including invalidity. No motion for preliminary injunction was filed. Other than a motion to dismiss the complaint (for which the District Court has issued no order nor scheduled a hearing for), no substantive motions have been brought before the District Court. The District Court will have invested little time in addressing the invalidity of the '411 patent by the time this Board decides whether to institute this Petition.

While the District Court invested some time in deciding the claim construction of “messaging gateway,” it will likely not invest significantly in deciding invalidity until dispositive motions are filed in September 2022. Ex. 1008, 1009. As such the Court is not expected to invest time in determining invalidity until months after an institution decision on this Petition.

Given these circumstances, this factor favors institution.

5. Whether the Petitioner and the Defendant in the Parallel Proceeding are the Same Party

The parties are the same in this IPR and in the litigation. Given the stipulation discussed above, however, this factor is neutral.

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6. Other Circumstances, that Impact the Board’s Exercise of Discretion, Including the Merits

Other circumstances strongly favor institution. In particular, denying institution here will (1) negate the statutorily provided 1-year filing period—because this Petition was filed before closure of the 1-year window; (2) encourage forum shopping; and (3) condition the institution of IPRs on the timing of an oft-changed trial placeholder. No other parties have sought IPR of the ’411 patent.

In particular, Congress, when enacting the America Invents Act, explained that district court defendants should be permitted more than 6 months to fully evaluate claims in a parallel litigation—extending the IPR bar date from 6 months to 1 year. *See* 157 Cong. Rec. S5429 (Sept. 8, 2011) (S. Kyl) (explaining importance of allowing an accused infringer to seek IPR in view of estoppel, and concomitant need to extend deadline from six months to 12 months to afford defendants a reasonable opportunity to identify and understand patent claims before filing an IPR that may trigger estoppel).

Moreover, the merits of the present Petition are particularly strong and outweigh countervailing considerations of efficiency. Had the Examiner been aware of these references during prosecution, the Examiner would not have issued the ’411 patent. As detailed below, the combinations based on Fox and the Java Message Service provide compelling disclosures that render obvious all claims of the ’411 patent. These considerations weigh in favor of institution. *Illumina, Inc.*

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v. Natera, Inc., IPR2019-01201, Paper 19 at 8 (PTAB Dec. 18, 2019) (instituting when “the strength of the merits outweigh relatively weaker countervailing considerations of efficiency”).

B. 35 U.S.C. § 325(d) Factors Support Institution

Similarly, the Board should not exercise its discretion under § 325(d).

Neither of the two prongs to analyze denial under 325(d) are relevant here.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, Paper 6 at 7 (PTAB Feb. 13, 2020).

1. None of the Cited Prior Art Was Cited During Prosecution

First, none of references discussed in this Petition have been considered by the Patent Office during prosecution. They were not considered by the Examiner, cited in an IDS, nor were they cited on the face of the ’411 patent. Moreover, there are no IPR or post-grant proceedings involving the ’411 patent to date. *See generally*, Ex. 1001, Ex. 1002.

2. The Cited Prior Art Is Not Cumulative of Cited Art

Second, the art cited in this Petition is not cumulative of the art substantively considered by the Examiner. Discretionary denial under § 325(d) is thus unwarranted. *Pure Storage, Inc. v. Realtime Data LLC*, IPR2018-00549, paper 7 at 11 (PTAB July 23, 2018). Rohrabough is directed to a proxy server receiving requests from clients to translate web content into a scalable vector representation

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and sending the translated content to the requesting client. Tamura discloses a mobile telephone apparatus with a remote access function and a remote access method for a mobile communication system. These were the only two references relied upon as rejecting references during prosecution. Neither disclose reformatting content into a vectorized format in a first network environment, receiving the reformatted content and addressing information at a messaging gateway, and sending the reformatted content to a mobile apparatus in a second network environment. After the patentee amended the claims such that the content and addressing information is received by the messaging gateway from the first network environment, the claims were allowed. These claim limitations are expressly disclosed by Fox and the JMS. Therefore, Rohrabough and Tamura are not cumulative Fox and the JMS.

X. GROUND 1: CLAIMS 1-20 ARE OBVIOUS IN VIEW OF FOX AND THE JAVA MESSAGE SERVICE

A. Overview of Ground 1

Fox in view of Java Message Service renders claims 1-20 obvious. Fox is cited for the majority of the limitations of the claims, with the exception of the “addressing information associated with an apparatus” limitations (limitations 1.2, 10.4, and 18.2), and the “authenticating” claims (claims 8, 9, and 17). Schmidt ¶52.

As discussed above, the parties dispute the scope of “messaging gateway.”

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Under Petitioner’s proposed construction, this term requires that information is addressed to and received by a specific device. PO’s proposed “ordinary meaning” for the term includes no such requirement. Thus, Fox – as viewed or modified through the teachings of the JMS to include the JMS’s point-to-point addressing model – renders the claims unpatentable under Petitioner’s proposed construction and likewise renders the claims unpatentable under PO’s proposed broader construction. Schmidt ¶53.

In particular, this Ground asserts that:

- Fox discloses the ’411 Patent’s method, apparatus, and computer-readable storage medium that interfaces between a first network environment and a second network environment to receive addressing information and content reformatted in a vectorized format. Fox uses systems known as the “Garnet Message Service” (“GMS”) and “Garnet Message Service Micro Edition” (“GMSME”). As discussed above, the GMS and GMSME allow for synchronous and asynchronous collaboration for computing devices to interact with each other and, in the case of the GMSME, allows for hand-held devices, mobile phones, as well as conventional desktops to join in one collaboration session. Fox explicitly states that the Garnet Message Service and Garnet Message Service Micro Edition were built on the Java Message Service. Fox discloses, using the publish/subscribe model of the Java Message Service, a

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PDA adaptor that receives content and addressing information from a fixed network environment that is destined for an apparatus in a cellular network environment. Fox further discloses “determining to generate a signal specifying access information to access the content.” Schmidt ¶54.

- The Java Message Service (“JMS”) discloses two models for sending a message from a first device to a second device. The two models are the publish/subscribe model and the point-to-point model. The JMS establishes (as does Dr. Schmidt, an expert in this field) that a POSITA would have naturally added the point-to-point model to Fox because Fox is JMS-based and the JMS discloses both the publish/subscribe and point-to-point models. As described below, a POSITA would have chosen either model depending on the use case. Moreover, modifying Fox’s addressing scheme to include JMS’s point-to-point model would have been well within the abilities of a POSITA with far more than a reasonable expectation of success. A POSITA, reading Fox in light of the JMS, would have been motivated to modify Fox to include the JMS teachings of point-to-point addressing for at least the reasons discussed below. Among other reasons, using the point-to-point addressing scheme would allow a developer greater control over the system and greater efficiencies (including mitigating connectivity and bandwidth issues), and would ensure delivery of messages to receiving devices, and allows for a message to be sent only once.

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Schmidt ¶54.

- The JMS also describes authenticating clients and it would have been obvious to a POSITA to combine Fox with the JMS’s teachings on authentication.

Schmidt ¶54.

B. Motivation to Combine Fox and Java Message Service

A POSITA, starting with the middleware and vector reformatting taught by Fox would have been motivated to combine the teachings of the JMS point-to-point model. Schmidt ¶55.

As already discussed, Ground 1 relies on a combination of Fox and the JMS, and more specifically relies on the teachings of the JMS’s point-to-point addressing scheme as disclosing the “addressing information” limitation. A POSITA would have understood that Fox expressly discloses the use of the JMS’s point-to-point addressing scheme (as disclosed in the JMS reference) as Fox expressly incorporates the JMS. In fact, Fox specifically describes the use of the JMS’s publish/subscribe addressing scheme. Fox’s Garnet Message Service Micro Edition (GMSME) is built on the JMS. As of 2001, the JMS was the *de facto* industry standard application programming interface (API) for message-oriented middleware used to facilitate the sending and receiving of messages between software systems. Schmidt ¶56.

While Fox does not specifically describe the use of Java’s point-to-point

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addressing scheme, a POSITA would have understood that since Fox was built on the JMS, Fox would have naturally incorporated the entirety of the JMS, not just select portions. Thus, a POSITA would have understood that Fox includes both publish/subscribe and point-to-point messaging, as both are included in the JMS. This point-to-point addressing scheme is described in the JMS reference that is part of Ground 1. Schmidt ¶57.

To the extent PO argues that a POSITA would not have understood Fox to have included the entirety of the JMS (or at least both the publish/subscribe and point-to-point messaging), it would have been obvious to modify Fox, according to the teachings of the JMS, to include point-to-point messaging. As already discussed, Fox expressly states that it is built on the JMS, and expressly uses its publish/subscribe addressing scheme. The JMS further includes the point-to-point addressing scheme, and a POSITA would have found the modification of Fox to include functionality already included in the JMS to be trivial, and would have naturally combined the entirety of the JMS with Fox, including the JMS point-to-point model.⁸ Indeed, the two models are expressly designed to be coexistent, as

⁸ Although Fox doesn't expressly state that it implements the point-to-point model, a POSITA would have understood that Fox would not have implemented only one of the two messaging models.

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the message header information utilized in a publish/subscribe message is also utilized in a point-to-point message and therefore the publish/subscribe header information already disclosed in Fox could readily be applied to the point-to-point model. Schmidt ¶58.

As described above, Fox describes using the publish/subscribe model of the JMS (e.g., Fox at 1). Generally speaking, the publish/subscribe model includes a device that is broadcasting content along with a “topic.” JMS at 11. Receiving devices subscribe to one or more topics. Devices that are listening for broadcasts can typically only receive broadcast messages if they are connected to the network at the time the messages are broadcast and if they are subscribing to a particular topic. To ensure delivery, a message may have to be broadcast multiple times. Unless the topic is pertinent to a particular receiving device (e.g., by ensuring that the topic appended to a message is subscribed to by a particular receiving device), transmitting devices typically are agnostic as to which device or devices receive broadcasted content (and whether the broadcasted content is received at all). *Id.* at 10-11; Schmidt ¶59.

This addressing scheme has several drawbacks. Primarily, it does not ensure delivery of content to specific devices. Moreover, the scheme does not guarantee on-time delivery. Thus, in situations where such guarantees are required, a POSITA would employ the point-to-point model instead of the publish/subscribe

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model. JMS at 10-11. The JMS highlights that “[p]oint-to-point is more convenient when you want one receiver to process any given message once-and-only-once. This is perhaps the critical difference between the two models: point-to-point guarantees that only one consumer processes a given message.” *Id.* at 71. If the user of the system were concerned about connectivity issues, the user would opt for the point-to-point model as “p2p messages are always delivered, regardless of the current connection status of the receiver.” *Id.* at 70; Schmidt ¶60.

A POSITA would understand that choosing the point-to-point model over the publish/subscribe model is merely a matter of preference, familiarity with the different models, and use case:

Almost anything that can be done with the pub/sub model can be done with point-to-point, and vice versa. An analogy can be drawn to developers' programming language preferences. In theory, any application that can be written with Pascal can also be written with C. Anything that can be written in C++ can also be written in Java. In some cases it comes down to a matter of preference, or which model you are already familiar with.

JMS Page 70.

In most cases, the decision about which model to use depends on the distinct merits of each model. With pub/sub, any number of subscribers can be listening on a topic, all receiving copies of the same message. The publisher may not care if everybody is listening, or even if nobody is listening. For example, consider a publisher that broadcasts stock quotes. If any particular subscriber is not currently connected and misses out on a great quote, the publisher is not concerned. Likewise, our `Wholesaler` class didn't care whether there were any subscribers when it sent price quotes: if a `Retailer` missed a great price, that wasn't the `Wholesaler's` problem. In contrast, a point-to-point session is likely to be intended for a one-on-one conversation with a specific application at the other end. In this scenario, every message really matters.

JMS Pages 70-71. Schmidt ¶61.

In use cases in which there are prospective connectivity issues (non-

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guaranteed message delivery), bandwidth issues (which leads to the desirability of sending a message once-and-only-once), and whether it is desirable for a message to be received by only one receiving device, a POSITA would implement the point-to-point model instead of the publish/subscribe model. Schmidt ¶62.

Same field of endeavor: Fox and the JMS are both directed to solving problems associated with sending messages and content between clients. Indeed, Fox refers numerous times to the JMS including internally citing the JMS as an endnote (see endnote 25). Fox describes that the GMSME “production collaboration systems use the Java Message service (JMS) as their publish-subscribe engine and we describe the PDA adaptor that acts as a filter for the PDA of events from JMS.” Fox at 1; Schmidt ¶63.

Similar techniques to solve the same problems: Fox describes a PDA adaptor as an addition to the Garnet Collaboration system to allow for content in a desktop environment to be transmitted to lightweight clients in a mobile environment. Fox describes the Garnet Message Service Micro Edition (GMSME) and the conversion of content into vector files for distribution to the mobile clients. As described above, in achieving this solution, Fox exploits the publish-subscribe model of the JMS. Fox refers to at least one aspect of the PDA adaptor as being “implemented in a pure Java solution.” Fox at 1. As described above, to ensure delivery to a particular mobile client, the JMS point-to-point model could be

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implemented instead of the publish/subscribe model to achieve the delivery of messages to mobile clients. Schmidt ¶64.

Reasonable expectation of success: Fox describes using the JMS and explicitly states that it was built using the JMS. Combining Fox and the JMS would have been readily accomplished, and a POSITA would have been motivated to do so with at least a reasonable expectation of success. Fox refers to the PDA adaptor and GMSME system as having been built on the JMS publish-subscribe engine and describes the PDA adaptor as acting like a filter for mobile clients for JMS events. The JMS is explicit that a POSITA, using the JMS framework, could implement the publish/subscribe model or the point-to-point model. JMS at 70-71; Schmidt ¶65.

Moreover, Fox describes that each device in its system (both fixed and mobile) has a MachineID. Fox at 3. A POSITA would understand that destination addresses, e.g., MachineIDs, could be used to implement the point-to-point addressing scheme with more than a reasonable expectation of success. “GMS messages [in the fixed network environment] contain many properties, such as a **destination**, a delivery mode, a messageID, which can be extracted from a message header, as well as a complex message body.” Fox at 3; emphasis added. Each of the mobile clients in the PDA adaptor architecture has a unique user ID, which is an address for the device: “The mobile user login ID, user ID, is unique

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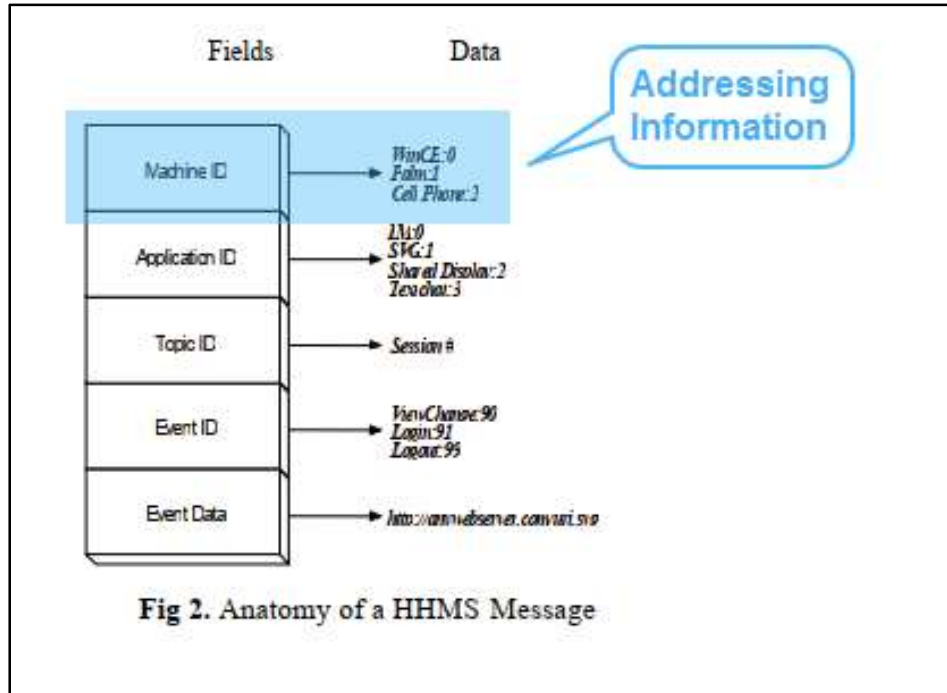
over the whole collaboration system. In the GMSME system, the unique user ID is a combination of **message destination address**, as well as the label of client message processing unit.” Fox at 2; emphasis added. Schmidt ¶66.

These addresses and IDs are already included in the GMS message body (from the fixed network environment to the PDA adaptor) and that GMS message body is parsed by the PDA adaptor for delivery to a mobile client (*see* below). When sending the message to the cellular network environment, the message is sent using the Hand Held Message Service (“HHMS”) protocol. The HHMS is a modification of the GMS event service adapted specifically to mobile terminals interfacing with the PDA adaptor. Fox at 3. The HHMS is used to account for the handicaps of mobile devices in performance and size compared to desktop machines. Fox at 2-3. Schmidt ¶67.

As shown in FIG. 2 of Fox, the anatomy of an HHMS Message includes a “MachineID” (e.g., “Cell Phone:2”) comprising addressing information associated with a mobile terminal. Schmidt ¶68.

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The messaging protocols already in use and described by Fox to implement the JMS publish/subscribe model can be used to implement the JMS point-to-point model. JMS at 34-35; Schmidt ¶¶69.

C. Claim 1

1. 1.P (Preamble)

A method comprising: To the extent the preamble is limiting, it is disclosed by Fox. Fox discloses a method for providing vectorized content to a mobile client from a source via a messaging gateway. E.g., Fox at 5; Schmidt ¶¶70.

2. Limitation 1.1

Interfacing, via a messaging gateway, a first network environment and a second network environment: Fox discloses this limitation. Schmidt ¶¶71.

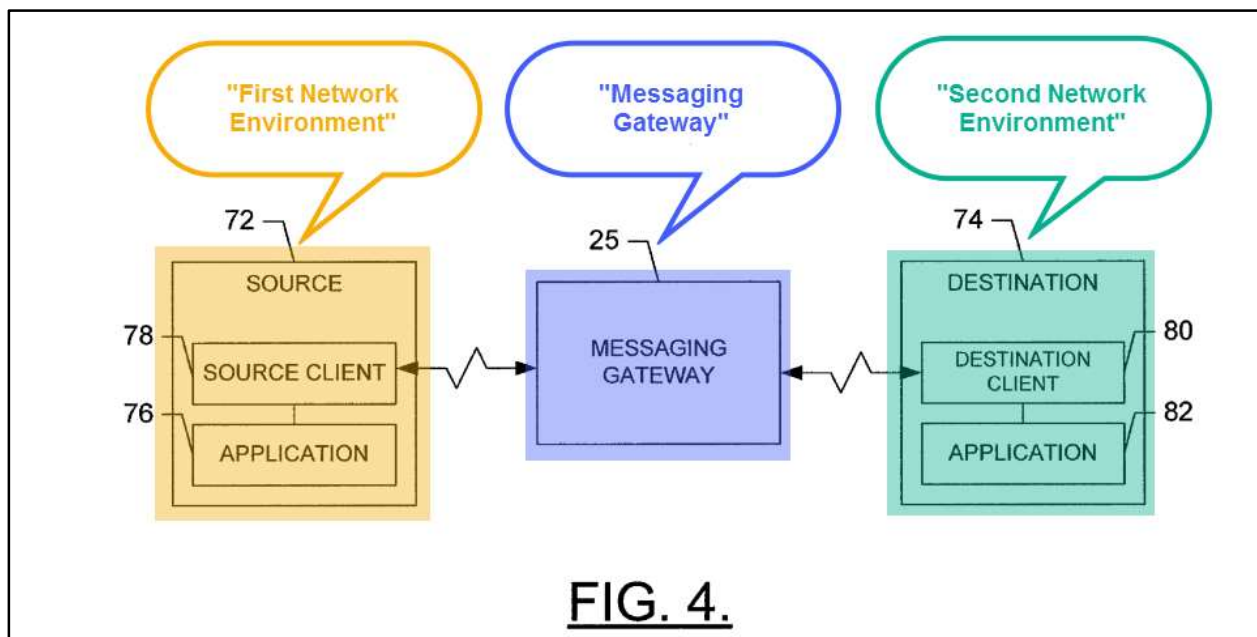
This limitation requires a first network environment, a second network

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environment, and a messaging gateway that interfaces with the first network environment and the second network environment. Schmidt ¶72.

FIG. 4 of the '411 patent shows a “functional block diagram of a source transferring content to a destination via a messaging gateway.” Ex. 1001 at 4:45-46. Content is provided from a fixed network environment (*id.* at 2:48-51) via a messaging gateway (*id.* at 2:57-59) to a mobile terminal operating in a cellular network environment (*id.* at 3:1-4). This is shown in the following annotated FIG. 4 of the '411 patent:



Schmidt ¶73.

Fox describes precisely the same system, which uses a first network environment, a second network environment, and a messaging gateway that sits between and interfaces with the first network environment and the second network

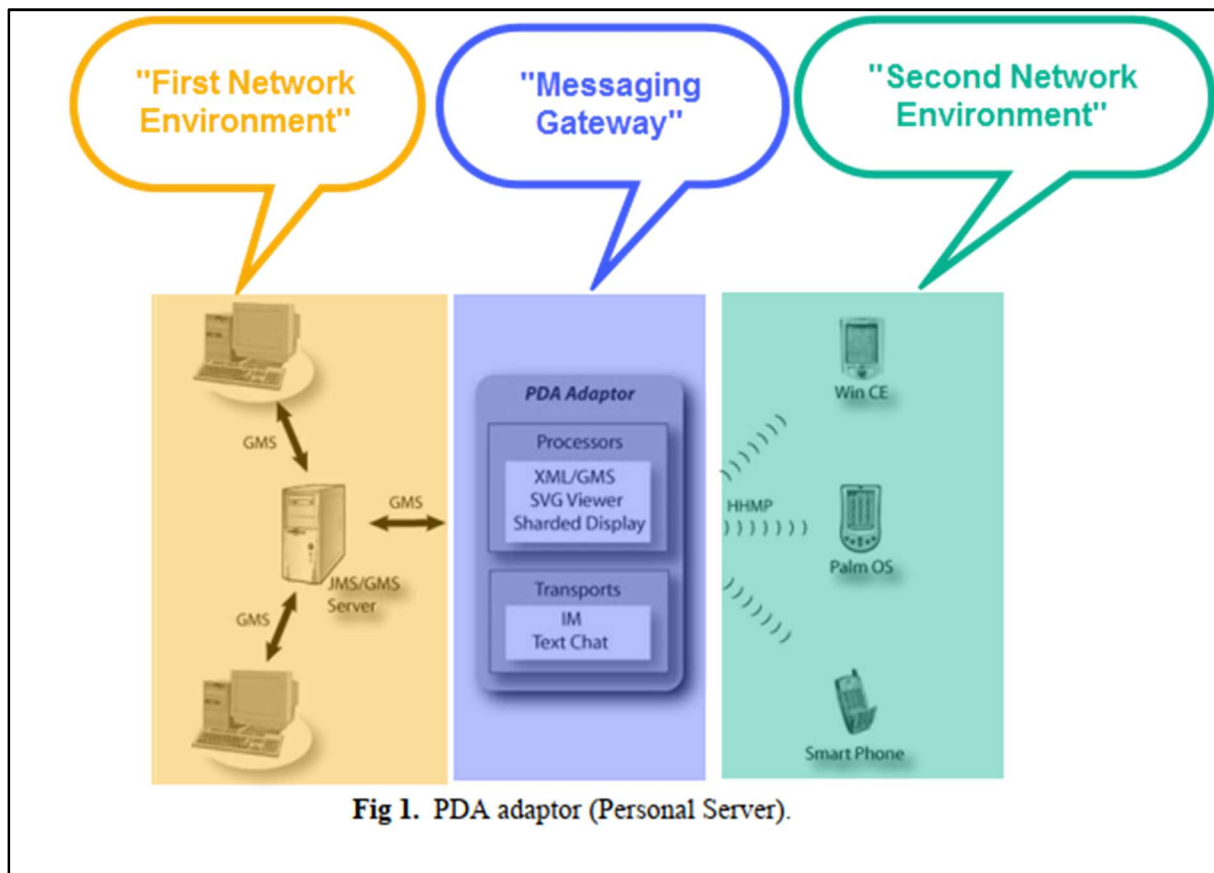
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environment. Schmidt ¶74.

- In Fox, the first network environment is a “conventional desktop environment.” Fox at 2; Schmidt ¶74.
- The second network environment in Fox is a “wireless communication” network. *Id.* at 2. Fox describes using an 802.11b wireless LAN for this wireless environment. Fox at 4; Schmidt ¶74.
- The messaging gateway in Fox is the PDA adaptor that “sits between mobile clients and the GMS system.” *Id.* at 2. The mobile clients are in the wireless (second) network environment and the GMS system is in the wired (first) network environment. Schmidt ¶74.

These elements are shown in the following annotated Fig. 1 of Fox:



Schmidt ¶75.

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The purpose of the PDA adaptor – just like the messaging gateway of the ’411 patent – is “to support lightweight clients, such as Personal Digital Assistants (PDAs)” for use of those mobile clients with the Garnet Message Service. Fox at 2. As shown in Fig. 1 of Fox, the PDA adaptor interfaces with portable devices (using the hand-held messaging protocol, shown on the right side of Fig. 1) and desktop computing devices (shown on the left side of Fig. 1). Schmidt ¶ 76.

3. Limitation 1.2

To receive, from the first network environment, content and addressing information associated with an apparatus within the second network environment: This limitation is obvious in view of Fox and the JMS. Specifically, the “addressing information” is disclosed by the JMS, the remaining elements of this limitation are disclosed by Fox. Schmidt ¶77.

To receive, from the first network environment, content:

As already discussed, Fox’s “wired” network connected to the PDA adaptor discloses the claimed “first network environment.” Fox at 2 (“The PDA adaptor sits between mobile clients and the GMS system. ... The PDA adaptor looks like a typical Garnet client to GMS, and adapts data to the client specifications.”). Devices within that network, e.g., the “JMS/GMS server” (Fox, Fig. 1) generates data (“content”) that is ultimately destined for (i.e., the claimed “associated with”) a mobile client in the second network environment. That content is received by the

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PDA adaptor (i.e., the messaging gateway). Fox at 2 (the PDA adaptor “does user management, message mapping, connection management, and message optimization.”). After being received by the PDA adapter, that same content is then ultimately received by the mobile client. *See generally*, Limitation 1.4. Schmidt ¶78.

To receive, from the first network environment, ... addressing information:

Fox is built on the JMS. A POSITA would have understood that, while Fox does not expressly describe the entirety of the JMS, it would not have incorporated only portions of its structure piecemeal. This would include both the publish/subscribe addressing scheme (which is expressly described) and JMS’s point-to-point addressing scheme. And to the extent that PO argues that a POSITA would not have this understanding, it would have been natural for a POSITA to implement more of the JMS – particularly the point-to-point model – than what was expressly described in Fox. The framework for modifying Fox to include the JMS point-to-point model already exists and is disclosed in Fox. The JMS states that “[e]very JMS message has a set of standard headers.” JMS at 34; Schmidt ¶79.

3.1 Headers

Every JMS message has a set of standard headers. Each header is identified by a set of accessor and mutator methods that follow the idiom `setJMS<HEADER>()`, `getJMS<HEADER>()`. Here is a partial definition of the `Message` interface that shows all the JMS header methods:

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Because Fox can achieve the JMS publish/subscribe model using the header information disclosed in Fox, this header information could readily be applied to the point-to-point model. Indeed, the JMS header information is discussed in the generic “Chapter 3. Anatomy of a JMS Message” of the JMS (*id.* at 33) (applicable to both the publish/subscribe and point-to-point models) and describes “Destination” header information. *Id.* at 35.

3.1.1.1 JMSDestination

The `JMSDestination` header identifies the destination with either a `Topic` or `Queue` object, both of which are `Destination` types. Identifying the message's destination is valuable to JMS clients that consume messages from more than one topic or queue:

```
Topic destination = (Topic) message.getJMSDestination( );
```

Schmidt ¶79.

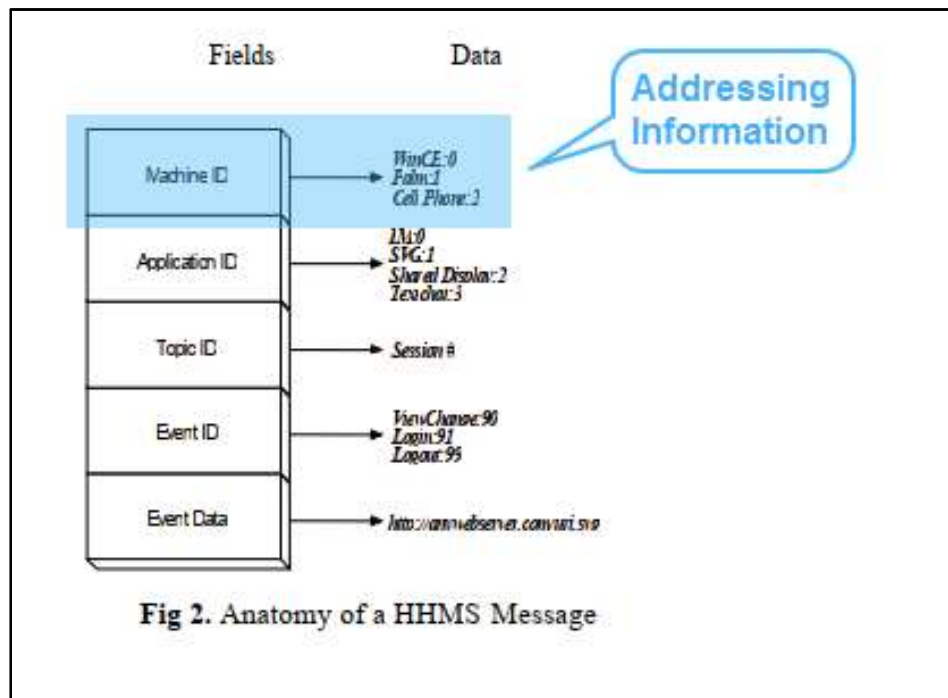
The JMS expressly states that in point-to-point messaging “[t]he **actual network location of the destination is transparent to the sender**, because the p2p client works with a Queue identifier obtained from a JNDI [Java Naming and Directory Interface] namespace, the same way that a pub[lish]/sub[scribe] client uses a Topic identifier.” JMS at 69. That is, in point-to-point messaging, the addressing information of the destination is known to the sender and that addressing information is sent by the sender along with the message content. Schmidt ¶80.

Fox discloses that each GMS message (sent to the PDA adaptor) already

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includes a “destination” (Fox at 3) and each SMSME message (generated by the PDA adaptor to be sent to a mobile client) has a “message destination address” (*id.* at 2). For example, each device in Fox’s system has a MachineID (Fox at 3) and this MachineID is in the header of messages transmitted in Fox. *Id.*; *see also* Fig. 2 of Fox below with the MachineID annotated in a message sent from the PDA adaptor to a mobile client. Because Fox discloses that the messaging is based, at least in part, on the identity of the recipient mobile client, a POSITA would have no trouble modify the messages in Fox to implement JMS point-to-point messaging. Schmidt ¶81.



To that end, using the point-to-point model, the claimed “addressing information associated with an apparatus in the second network environment” (e.g., a MachineID for a specific destination mobile client) is received by the PDA

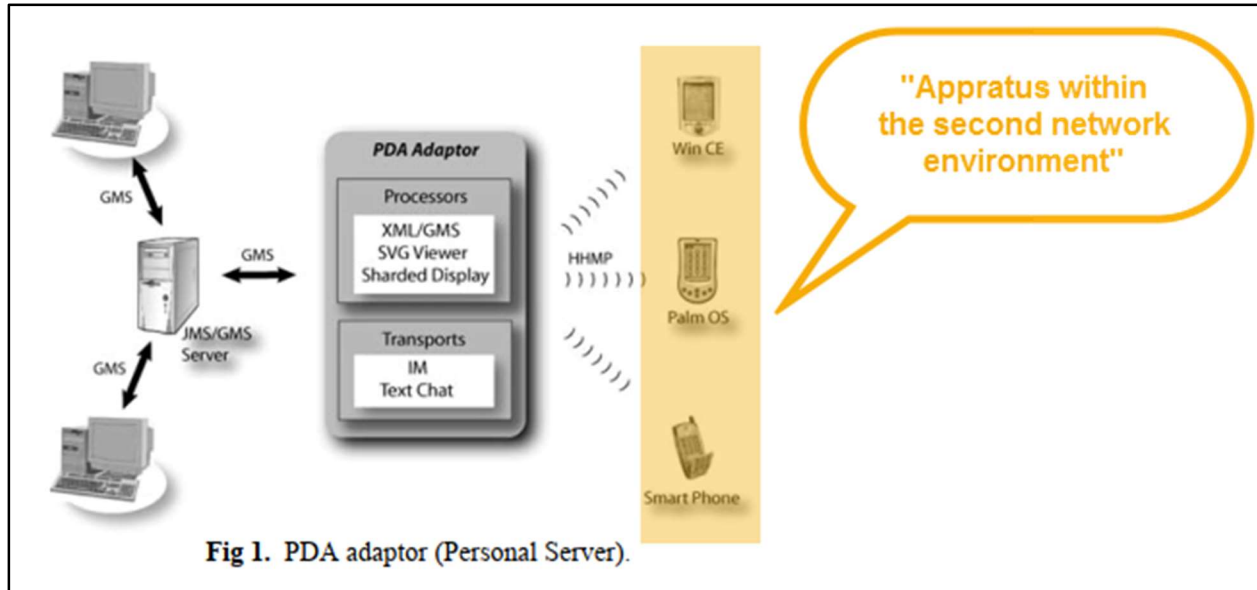
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adaptor (the “messaging gateway”) from the first network environment (e.g., a personal computer) for ultimate delivery to a specific mobile client. Schmidt ¶82.

Associated with an apparatus within the second network environment:

The claimed “apparatus within the second network environment” is a mobile client in Fox’s wireless (*i.e.*, the second) network environment. Fox at 2. This mobile client is shown, for example, as a “Smart Phone,” “Palm OS” device, or “Win CE” device in Fig. 1:



Schmidt ¶83.

As already discussed above, this content and addressing information is “associated” with a particular device in the second network environment because the addressing information is used to ultimately deliver the content to a device in the second network environment. Moreover, Fox also describes content and addressing information being associated with a mobile client using a mobile

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telephone number, session initiation protocol (SIP), or short messaging service (SMS). *See* claims 6-7 (below). Schmidt ¶84.

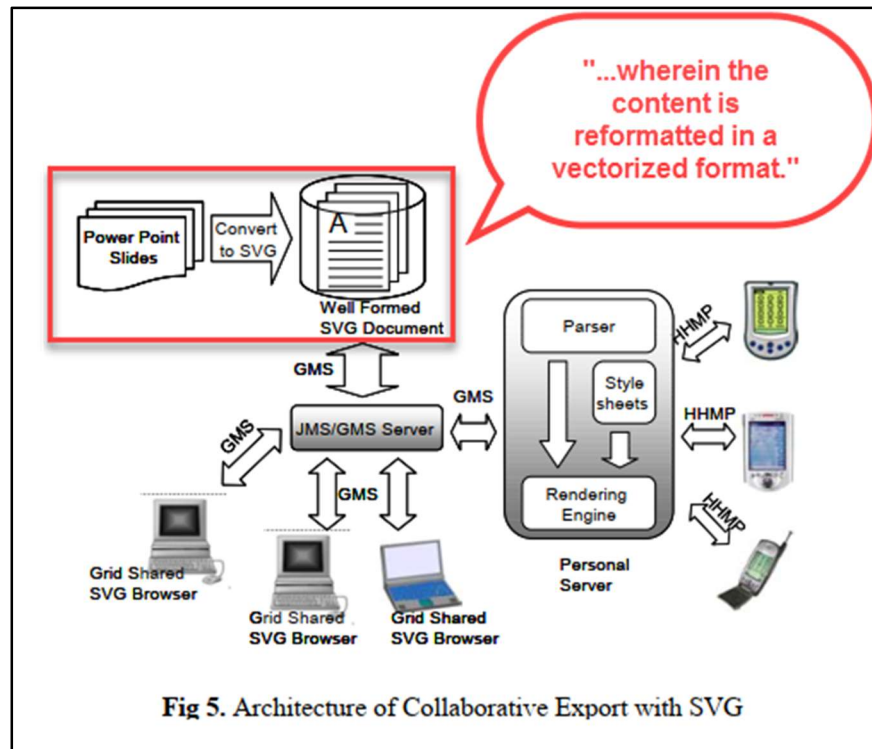
4. Limitation 1.3

Wherein the content is reformatted in a vectorized format; and: Fox discloses this limitation. Schmidt ¶85.

Fox discloses converting file formats – such as Adobe Illustrator, PowerPoint, and Macromedia Flash – into a vectorized format, *inter alia* the Scalable Vector Graphics (SVG) format. In particular, “[t]he scalable formats of the W3C’s [World Wide Web Consortium] Scalar Vector Graphics (SVG) and Adobe, Inc’s Portable Document Format (PDF) are ... a major advantage of Garnet System.” Fox at 6. Fox describes that “SVG is useful as it is already available for Adobe Illustrator and both PowerPoint and Macromedia Flash are exportable to this syntax.” *Id.* “Currently there is a Flash (which is a binary 2D vector graphics format) to SVG converter from the University of Nottingham; OpenOffice.org’s *OpenOffice* exports PowerPoint to SVG.” *Id.* Schmidt ¶86.

Figure 5 of Fox, annotated below, shows a PowerPoint presentation being converted to SVG, a vectorized format. Fox also describes that a converted SVG document is given a URI (Uniform Resource Identifier) and “[a]n exported SVG document is shared by its URI in the Garnet System.” Fox at 6. Schmidt ¶87.

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5. Limitation 1.4

Determining to generate a signal specifying access information to access the content. Fox discloses this limitation. Schmidt ¶¶88.

This limitation is agnostic as to what is making the determination, and is therefore rendered obvious where the gateway is making the determination. This is expressly disclosed by Fox. Schmidt ¶¶89.

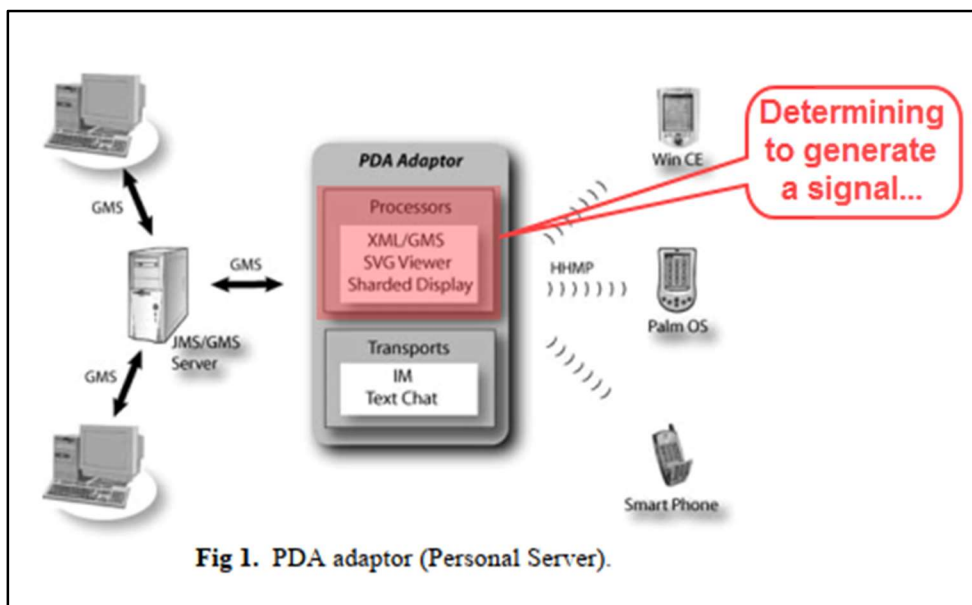
Fox discloses sending a message to a mobile client with an indication that reformatted content is available to be delivered to the mobile client. For example, in response to receiving the content and addressing information described in limitations 1.2 and 1.3 (e.g., the URI), Fox describes that the PDA adaptor generates a signal to send content and addressing information destined for a mobile

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client. Fox at 3 (“[W]e seamlessly exchange information from the conventional Garnet collaboration system with information on the mobile device.”). The purpose of Fox and the GMSME system is to send content between devices, and particularly to include mobile clients in addition to the desktop clients that were already part of the GMS/JMS system. Fox at 1 (“Universal access refers to the need that all users can access information systems (grids) independent of their access device and their physical capabilities.”); Schmidt ¶¶90.

In order to determine where to send the content and addressing information, Fox describes that “[w]e keep user profile and mobile device profile, such as screen size and device type in the PDA adaptor.” Fox at 3. Fox therefore discloses a determination to generate a signal to send to a mobile client based on the device specification of the mobile client, where the signal includes the URI (the claimed “specifying access information to access the content”). Schmidt ¶¶91.



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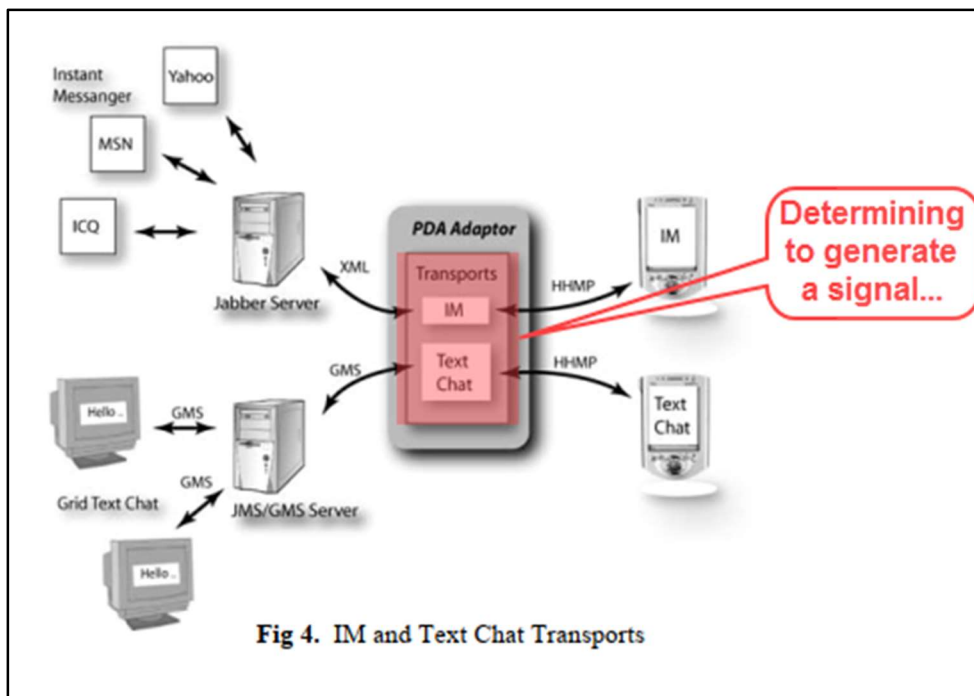
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Fox also discloses this limitation through its description of determining to generate and send signals via Instant Messenger and Text Chatting. Fox at 4. The Instant Messages and Text Chats are between the desktop devices in the fixed (first) network environment and a mobile client or clients in the cellular (second) network environment. *Id.* (“We have integrated PDA based Instant Messenger (IM) and Text Chat into the GMS publish/subscribe collaboration environment.”). These signals can include the vectorized content. *See*, Fox at 5 and Figure 5 (reproduced above in limitation 1.3). A POSITA would understand that these signals would likewise include a link or a URI for the vectorized content. Schmidt ¶92.

Although described in connection with the publish/subscribe model, for the reasons described above, these Instant Messenger and Text Chatting signals could be sent using the JMS point-to-point model. Indeed, in some instances, it would have been desirable to do so (e.g., connectivity issues, bandwidth issues, sensitivity of information issues). Schmidt ¶93.

See Fig. 4 below with Instant Messaging between a fixed device and a mobile client via the PDA adaptor highlighted:

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Schmidt ¶94.

Furthermore, Fox also describes “[u]sing SMS transport [Short Message Service for sending brief messages] ... to exchange messages between disparate platforms into the PDA adaptor [to] support disparate mobile information devices for universal collaboration and access.” Fox at 5. That is, Fox also describes a determination to generate an SMS signal between the PDA adaptor and mobile clients. Schmidt ¶95.

D. Claim 2

..., determining to transmit the content to the apparatus in response to a request from the apparatus, the request being generated in response to the signaling. This limitation is obvious in view of Fox. Schmidt ¶96.

As described in connection with limitations 1.2 and 1.4, Fox teaches that,

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after conversion into the vectorized format, “[a]n exported SVG document is shared by its URI in the Garnet System and the PDA adaptor subscribes to this information.” Fox at 6. As also described in connection with limitations 1.2 and 1.4, a desktop device may, using the point-to-point scheme of the JMS, send a message to the PDA adaptor that an SVG document has been converted and that the document is to be sent to a particular mobile device. Once received by the PDA adaptor, the PDA adaptor can then furnish a signal to the mobile device to access the content by the URI of the content. Schmidt ¶97.

In response to receiving the URI at the mobile client, a user of the mobile client to which the URI was sent can select to download the content by the content’s URI. Fox describes the URI as separate from the content itself. Fox at 6 (“An exported SVG *document* is shared by its *URI*.” Emphasis added.). A POSITA would recognize that, after a user selects to download the content, the PDA adaptor determines to transmit the content to the mobile client. Schmidt ¶98.

To the extent that PO argues that Fox describes files being transferred from the PDA adaptor to mobile clients in a format other than a vectorized format (e.g., images as a raster or a bitmap), it would have been obvious to a POSITA to transfer the content in a vectorized format which is typically “much smaller in file size than traditional ... JPEG graphics” or bitmaps. See, e.g., <https://www.sitepoint.com/v-svg-which-should-choose/>; <http://www.csun.edu/>

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~cam75434/project/SVG/bvv.htm; <https://pubsapp.acs.org/subscribe/archive/tcaw/11/i06/html/06comp.html>. Schmidt ¶99.

E. Claim 3

..., wherein the content is in a scalable vector graphics (SVG) format.

As described above in connection with limitation 1.3, Fox discloses that the content is reformatted into SVG format. Schmidt ¶101.

F. Claim 4

..., determining to reformat the content into another vectorized format supported by the apparatus for transmitting the reformatted content to the apparatus. This limitation is obvious in view of Fox. Schmidt ¶102.

For example, Fox describes exporting documents in Portable Document Format (PDF). Fox at 6. PDF is a vector format. As with an exported SVG document (see claim 1 above), an exported PDF document would have a URI associated with it and the PDA adaptor would receive a message with this URI. Schmidt ¶103.

Fox also describes that “[t]o reduce process load of mobile device, we move the processing module for each application from the hand held device to the PDA adaptor on the server side.” In addition, “the PDA adaptor performs graphic processing needed for SVG or shared export events. Because of this processing, the mobile client receives a ready to use image from the PDA adaptor.” Fox at 3.

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Consequently, Fox describes formatting content in a first vectorized format (the content exported into PDF format) into another vectorized format (SVG). Schmidt ¶104.

To the extent PO argues that Fox doesn't explicitly disclose reformatting the content into another vectorized format, in view of the above and the desirability to have content in the SVG format, it would have been obvious to a POSITA to do so. Schmidt ¶105.

G. Claim 5

A method of claim 4, further comprising:

receiving either a text message, a source identification, or a combination thereof; and

determining to append the reformatted content to the text message, the source identification, or the combination thereof, for transmission to the apparatus. This limitation is obvious in view of Fox. Schmidt ¶106.

As described in connection with limitations 1.2 and 1.4, and claim 2, Fox teaches the integration of text messaging (including SMS messages) to send messages from a desktop environment to a mobile client via the PDA adaptor. Fox at 5. In particular, Fox states “[u]sing SMS transport ... to exchange messages between disparate platforms into the PDA adaptor, we can support disparate mobile information devices for universal collaboration and access.” *Id.* In

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response to receiving the reformatted content at the PDA adaptor, the PDA adaptor determines to append (and appends) the reformatted content to the SMS before transmission to the particular mobile client. Fox at 6; Schmidt ¶107.

H. Claim 6

..., wherein the addressing information includes either a mobile telephone number, a session initiation protocol (SIP) address, or a combination thereof.

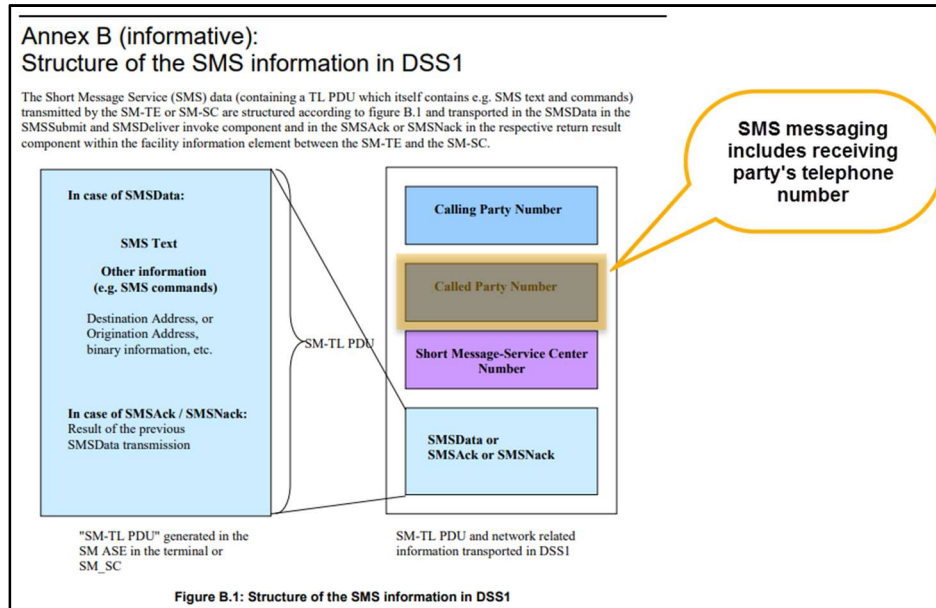
This limitation is obvious in view of Fox. Schmidt ¶108.

As described above in connection with limitation 1.4 and claim 2, Fox describes sending the content to a mobile device by SMS. SMS messages are sent to mobile devices using the mobile telephone number of the device. *See* [https://en.wikipedia.org/wiki/Short_Message_Service_technical_realisation_\(GSM\)](https://en.wikipedia.org/wiki/Short_Message_Service_technical_realisation_(GSM)) (“When the SMSC [Short Message service center] determines it needs to attempt to deliver a Short Message to its destination, it will send the SMS-PP APDU [Application Protocol Data Unit] containing the text message, the ‘B-Party’ (**destination phone number**) and other details to the Gateway MSC (GMSC) logical component on the SMSC”) (emphasis added). That is, the addressing information includes a mobile telephone number. *See also*, Short Message Service (SMS) for fixed networks; Network Based Solution (NBS); Part 3: Integrated Services Digital Network (ISDN) Access Protocol, page 23 (located at https://www.etsi.org/deliver/etsi_es/202000_202099/20206003/01.01.01_60/es_20

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206003v010101p.pdf) which shows that an SMS Protocol Data Unit includes the receiving party's telephone number. Schmidt ¶109.



In addition, Fox discloses integrating an Instant Messenger (IM) feature and a Text Chat feature into the GMSME environment. Fox at 4-5. Instant Messenger is built on the Session Initiation Protocol (SIP) which is a “signaling protocol used for initiating, maintaining, and termination real-time sessions that include[s] ... instant messaging.” See, https://en.wikipedia.org/wiki/Session_Initiation_Protocol. The Instant Messenger features of Fox therefore relies upon, at least in part, a session initiation protocol. It is therefore obvious, in view of Fox, that the addressing information includes a session initiation protocol address. Schmidt ¶110.

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I. Claim 7

..., wherein the signaling is in compliance with a short messaging service (SMS), or a session initiation protocol (SIP): This limitation is obvious in view of Fox. Schmidt ¶111.

As described in connection with limitation 1.4 and claims 2 and 6, Fox describes the integration of SMS messaging and instant messaging (based on SIP) into the Garnet system architecture which provides for signaling a device in a mobile network environment (the second network environment) via the PDA adaptor (the messaging gateway). The signaling is therefore in compliance with a short message service or session initiation protocol. Schmidt ¶112.

J. Claim 8

..., determining to authenticate the apparatus based, at least in part, upon the addressing information of the apparatus. This limitation is obvious in view of Fox and the JMS. Schmidt ¶113.

As described above in connection with limitation 1.2, the architecture described in Fox is built on the JMS. Fox at 1. The JMS describes authentication of the user (client) to the messaging system and verification of the server to the JMS client. JMS at 116; Schmidt ¶114.

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7.3.1 Authentication

Simply put, authentication verifies the identity of the user to the messaging system; it may also verify the identity of the server to the JMS client. The most common kind of authentication is a login screen that requires a username and a password. This is supported explicitly in the JMS API when a `Connection` is created, as well as in the JNDI API when an `InitialContext` is created. JMS providers that use username/password authentication may support either of these solutions:

The JMS also describes authentication by the use of public keys or secret keys (JMS at 117) commonly known and used in cryptography. *See*, for example, https://en.wikipedia.org/wiki/Public-key_cryptography and https://en.wikipedia.org/wiki/Key_authentication. Schmidt 115.

JMS providers may also use more sophisticated mechanisms for authentication, such as secret or public key authentication. Secret key authentication, most commonly used in Kerberos, requires the participation of a Kerberos server.^[5] Public key authentication, most commonly used in SSL, is based on a chain of certifying authorities. Each of these systems has its supporters and detractors, but the end result is the same: the connecting client is given permission to access the system.

Knowing that Fox is built on the JMS, it would have been obvious to a POSITA to combine the authentication features of the JMS with Fox such that the mobile clients described in Fox would be authenticated based, at least in part, on the addressing information of the mobile clients (e.g., the MachineID). Indeed, it would be desirable, at least in some circumstances, to authenticate a mobile client such as when sensitive information is being transmitted from the fixed network environment to a mobile client. Schmidt ¶116.

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K. Claim 9

A method of claim 8, wherein the apparatus is authenticated based, at least in part, upon an international mobile equipment identification code associated with the apparatus, a session authentication key transferred to the apparatus during the signaling, or a combination thereof. This limitation is obvious in view of Fox and the JMS. Schmidt ¶117.

As described above in connection with claim 8 (by reference to limitation 1.2), Fox alone describes sending HHMS messages that include a “MachineID” (e.g., “Cell Phone:2”). Fox at 3, FIG. 2. A POSITA would naturally be inclined to include the IMEI code associated with a mobile device as part of the MachineID or otherwise as part of the message header information. Schmidt ¶118.

Fox, in combination with the JMS, also renders this limitation obvious. As described above in claim 8, the JMS describes public keys and secret keys to authenticate a JMS client. E.g., JMS at 116-117. It would have been obvious to a POSITA to use the public keys and secret keys to create a session key – to authenticate communications between the PDA adaptor and mobile clients – using commonly known cryptographic techniques for encrypting and authenticating communications between a sender and receiver. See, e.g., https://en.wikipedia.org/wiki/Key_authentication (“Key authentication is used to solve the problem of authenticating the keys of the person (say ‘person B’) to

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whom some other person (‘person A’) is talking to or trying to talk to”);

https://en.wikipedia.org/wiki/Message_authentication_code (“The MAC [message authentication code] value protects a message's data integrity, as well as its authenticity, by allowing verifiers (who also possess the secret key) to detect any changes to the message content”). Schmidt ¶119.

L. Claim 10

1. 10.P (Preamble)

An apparatus comprising: To the extent the preamble is limiting, it is disclosed by Fox. Fox discloses an apparatus for providing content to a mobile client from a source via a messaging gateway. Fox at 5; Schmidt ¶120.

Fox discloses this limitation for the reasons given for limitation 1.P (Preamble). Schmidt ¶121.

2. Limitation 10.1

At least one processor: Fox discloses this limitation. First, a POSITA would have understood that disclosure of a server (e.g., Fox at 2, 3; Fig. 1) is also an express disclosure of “at least one processor,” as a server by definition would include a processor.⁹ In addition to a processor being inherent in the server

⁹ Indeed, to the extent the disclosure of a “server” is not an express disclosure of at least one processor, it would make the at least one processor obvious.

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devices, desktop computing devices, the PDA adaptor, and the mobile devices, Fox discloses that lightweight mobile clients typically have slower processors than conventional desktop devices. Fox at 2. In addition, Fox also discloses an API for application processors that does message processing of mobile device applications such as converted SVG content. Fox at 2; Schmidt ¶122.

3. Limitation 10.2

At least one memory including computer program code for one or more programs: Fox discloses this limitation. In addition to a memory and computer code being inherent in the server, desktop computing devices, the PDA adaptor, and the mobile devices, Fox describes the PDA adaptor using a register table to manage connections and deliver messages. Fox at 2. Schmidt ¶123.

4. Limitation 10.3

The at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to perform at least the following: Fox discloses this limitation. Fox describes that the “new universal collaboration and access architecture ... supports mobile devices and desktop computers.” Fox at 2. Fox further describes that the features of the GMS and GMSME are shown in Table 1, below. Schmidt ¶124.

Schmidt ¶122. For similar reasons, it would be inherent in the disclosure of a server. Schmidt ¶122.

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Garnet Message Service (GMS)	Garnet Message Service Micro Edition (GMSME)
Conventional Desktop Environment	Lightweight Clients
XML, JMS, P2P	Wireless Communication
Dynamic Routing	Optimized Protocol (HHMS)
Guarantee Delivery	User Status Management

Table 1. GMS and GMSME comparison

Fox also states that “the GMS server deals with message routing [and] the PDA adaptor of GMSME does the same task for mobile devices.” *Id.* at 2. To perform this message routing, a memory, computer code, and a processor are required. For example, Fox expressly states that “[t]o reduce process load of mobile device, we move the processing module for each application from the hand held device to the PDA adaptor on the server side. For example, before sending an event message, such as a shared export update, the PDA adaptor performs graphic processing needed for SVG or shared export events.” Fox at 3. Schmidt ¶125.

The at least one processor in limitation 10.1 and the at least one memory and computer code in limitation 10.2 are thereby configured to perform the following limitations. Schmidt ¶126.

5. Limitation 10.4

Interface, via a messaging gateway, a first network environment and a second network environment: Fox discloses this limitation for the reasons given for limitation 1.1. Schmidt ¶127.

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6. Limitation 10.5

To receive, from the first network environment, content and addressing information associated with an apparatus associated within the second network environment: This limitation is obvious in view of Fox and the JMS Service for the reasons given for limitation 1.2. Schmidt ¶128.

7. Limitation 10.6

Wherein the content is reformatted in a vectorized format; and: Fox discloses this limitation for the reasons given for limitation 1.3. Schmidt ¶129.

8. Limitation 10.7

Determine to generate a signal specifying access information to access the content: Fox discloses this limitation for the reasons given for limitation 1.4. Schmidt ¶130.

M. Claim 11

..., determine to transmit the content to the apparatus in response to a request from the apparatus, the request being generated in response to the signaling: This limitation is obvious in view of Fox for the reasons given for claim 2. Schmidt ¶131.

N. Claim 12

..., wherein the content is in a scalable vector graphics (SVG) format: Fox discloses this limitation for the reasons given for claim 3. Schmidt ¶132.

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O. Claim 13

..., determine to reformat the content into another vectorized format supported by the apparatus, for transmitting the reformatted content to the apparatus: This limitation is obvious in view of Fox for the reasons given for claim 4. Schmidt ¶133.

P. Claim 14

An apparatus of claim 13, wherein the apparatus is further caused to: receive either a text message, a source identification, or a combination thereof; and

determine to append the reformatted content to the text message, the source identification, or the combination thereof, for transmission to the apparatus: This limitation is obvious in view of Fox for the reasons given for claim 5. Schmidt ¶134.

Q. Claim 15

..., wherein the addressing information includes either a mobile telephone number, a session initiation protocol (SIP) address, or a combination thereof: This limitation is obvious in view of Fox for the reasons given for claim 6. Schmidt ¶135.

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R. Claim 16

An apparatus according to claim 15, wherein the signaling is in compliance with a short messaging service (SMS), or a session initiation protocol (SIP): This limitation is obvious in view of Fox for the reasons given for claim 7. Schmidt ¶136.

S. Claim 17

..., determine to authenticate the apparatus based, at least in part, upon the addressing information of the apparatus: This limitation is obvious in view of Fox and the JMS for the reasons given for claim 8. Schmidt ¶137.

T. Claim 18

1. 18.P (Preamble)

A computer-readable storage medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following steps: To the extent the preamble is limiting, it is disclosed by Fox. Fox discloses a computer-readable storage medium – such as a server – that causes an apparatus to perform the steps described below. *See, e.g.,* Fox at 2, 3; Fig. 1. Fox discloses this limitation for the reasons given for limitation 1.P (Preamble). Schmidt ¶138.

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2. Limitation 18.1

Interfacing, via a messaging gateway, a first network environment and a second network environment: Fox discloses this limitation for the reasons given for limitation 1.1. Schmidt ¶139.

3. Limitation 18.2

To receive, from the first network environment, content and addressing information associated with an apparatus associated within the second network environment: This limitation is obvious in view of Fox and the JMS for the reasons given for limitation 1.2. Schmidt ¶140.

4. Limitation 18.3

Wherein the content is reformatted in a vectorized format; and: Fox discloses this limitation for the reasons given for limitation 1.3. Schmidt ¶141.

5. Limitation 18.4

Determining to generate a signal specifying access information to access the content: Fox discloses this limitation for the reasons given for limitation 1.4. Schmidt ¶142.

U. Claim 19

..., determining to transmit the content to the apparatus in response to a request from the apparatus, the request being generated in response to the

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signaling: This limitation is obvious in view of Fox for the reasons given for claim 2. Schmidt ¶143.

V. Claim 20

..., wherein the content is in a scalable vector graphics (SVG) format: Fox discloses this limitation for the reasons given for claim 3. Schmidt ¶144.

XI. GROUND 2: CLAIMS 1-7, 10-16, AND 18-20 ARE OBVIOUS IN VIEW OF FOX

A. Overview of Ground 2

Fox renders claims 17, 10-16, and 18-20 obvious. In particular, this Ground asserts that Fox alone provides for addressing mobile clients in three ways (Schmidt ¶145):

- *Direct addressing:* Fox includes code that allows the messaging gateway to deliver content to a specific apparatus in the second network environment (without relying on the JMS).¹⁰ This embodiment renders the claims unpatentable under either Petitioner’s proposed construction of “messaging gateway” or under PO’s broader, “ordinary meaning,” construction. Schmidt ¶145.
- *Publish/subscribe addressing (addressing a particular mobile client):* Fox

¹⁰ This addressing scheme is different than the point-to-point addressing scheme disclosed in JMS, and is expressly disclosed in Fox.

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discloses the JMS publish/subscribe addressing scheme. The “topic” in a message published in the publish/subscribe addressing scheme can be set such that the content is delivered only to a specific apparatus in the second network environment. This embodiment renders the claims unpatentable under either Petitioner’s proposed construction of “messaging gateway” or under PO’s broader, “ordinary meaning,” construction. Schmidt ¶145.

- *Publish/subscribe addressing (agnostic as to the mobile client or clients that are addressed)*: Fox discloses that, when broadcasting messages, it is agnostic as to which mobile client or clients the content is delivered to. Fox’s PDA adaptor will deliver the content to any devices that is subscribed to the topic. This embodiment renders the claims unpatentable under PO’s “ordinary meaning” construction of “messaging gateway.” Schmidt ¶145.

B. Claim 1

1. 1.P (Preamble)

A method comprising: To the extent the preamble is limiting, it is disclosed by Fox. Fox discloses this limitation for the reasons given for Ground 1, 1.P (Preamble). Schmidt ¶146.

2. Limitation 1.1

Interfacing, via a messaging gateway, a first network environment and a second network environment: Fox discloses this limitation for the reasons given

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for Ground 1, limitation 1.1. Schmidt ¶147.

3. Limitation 1.2

To receive, from the first network environment, content and addressing information associated with an apparatus within the second network environment: This limitation is obvious in view of Fox. Schmidt ¶148.

Direct addressing:

To receive, from the first network environment, content:

Fox discloses this limitation for the reasons given for Ground 1, limitation 1.2. Schmidt ¶149.

To receive, from the first network environment, ... addressing information:

As described above, Fox describes that included in a GMS message header (from the fixed network environment to the PDA adaptor) is a destination address such as a MachineID. Fox at 3. When received by the PDA adaptor, the GMS message is parsed for delivery to a mobile client. *Id.* at 2-3. The content is then sent to a mobile client using the Hand Held Message Service (“HHMS”) protocol which also includes a MachineID. *Id.* at 3. Devices in the first network environment can therefore target specific clients in the second network environment using the MachineID of that specific client, the MachineID being sent as part of the message in the GMS and then included as part of the message sent in the second network environment using the HHMS protocol. Schmidt ¶150.

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Associated with an apparatus within the second network environment:

The MachineID in Fox is associated with a mobile client in the second network environment. Fox at 3. Particular mobile clients can therefore be targeted to receive content and addressing information. Schmidt ¶151.

Publish/subscribe addressing (addressing a particular mobile client):

To receive, from the first network environment, content:

Fox discloses this limitation for the reasons given for Ground 1, limitation 1.2. Schmidt ¶152.

To receive, from the first network environment, ... addressing information:

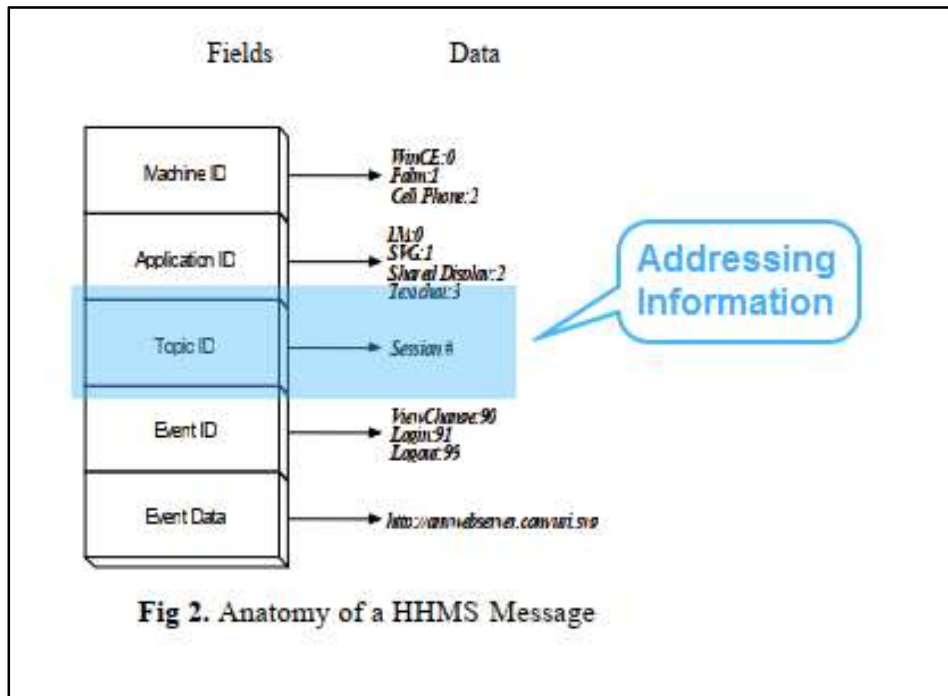
Using the publish/subscribe model, Fox describes the PDA adaptor “listening” to messages and events broadcast on the Garnet collaboration system (the fixed network) by subscribing to the Garnet Message Service. Fox at 2. These messages and events are “topics” that are broadcast by sending devices and received by subscribing clients. Schmidt ¶153.

Shown below is the anatomy of an HHMS with the “TopicID” annotated. When using the publish/subscribe model of the JMS (which Fox is based on and is disclosed in Fox), a topic is appended to the content as a message header when sending that content from the first network environment. Fox at 2-3. This message is broadcast to all receiving devices, including the PDA adaptor which then redistributes the message to mobile clients in the wireless network

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environment. *Id.* Under the publish/subscribe model, the “topic” can be understood as the claimed “addressing information.” The message will be delivered to only those clients that are subscribed to the topic. Schmidt ¶154.



Associated with an apparatus within the second network environment:

When using the publish/subscribe model of the JMS, the “topic” (Fox at 2-3) can be set such that only a particular target mobile client will receive the message and no other mobile clients will receive the message. This can be accomplished by setting the topic to a topic that only a particular mobile client is subscribed to. For example, the topic can be set to that particular mobile client’s MachineID or international mobile equipment identification code. A “topic” is thereby associated with a particular mobile client. Schmidt ¶155.

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Publish/subscribe addressing (agnostic as to the mobile client or clients that are addressed):

To receive, from the first network environment, content:

Fox discloses this limitation for the reasons given for Ground 1, limitation 1.2. Schmidt ¶156.

To receive, from the first network environment, ... addressing information:

Fox discloses this limitation for the reasons described immediately above in connection with using the publish/subscribe model to address a particular mobile client. Schmidt ¶157.

Associated with an apparatus within the second network environment:

As described in Fox at 2-3, the topic can be set such that a non-descript mobile client or clients receive the message. The sending device may not be aware which client or clients is subscribed to the topic. Schmidt ¶158.

4. Limitation 1.3

Wherein the content is reformatted in a vectorized format; and: Fox discloses this limitation for the reasons given for Ground 1, limitation 1.3. Schmidt ¶159.

5. Limitation 1.4

Determining to generate a signal specifying access information to access the content. Fox discloses this limitation for the reasons given for Ground 1,

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limitation 1.4. Schmidt ¶160.

C. Claim 2

..., determining to transmit the content to the apparatus in response to a request from the apparatus, the request being generated in response to the signaling. This limitation is obvious in view of Fox for the reasons given for Ground 1, claim 2. Schmidt ¶161.

D. Claim 3

..., wherein the content is in a scalable vector graphics (SVG) format.

Fox discloses this limitation for the reasons given for Ground 1, claim 3. Schmidt ¶162.

E. Claim 4

..., determining to reformat the content into another vectorized format supported by the apparatus for transmitting the reformatted content to the apparatus. This limitation is obvious in view of Fox for the reasons given for Ground 1, claim 4. Schmidt ¶163.

F. Claim 5

A method of claim 4, further comprising:

receiving either a text message, a source identification, or a combination thereof; and

determining to append the reformatted content to the text message, the

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source identification, or the combination thereof, for transmission to the apparatus. This limitation is obvious in view of Fox for the reasons given for Ground 1, claim 5. Schmidt ¶164.

G. Claim 6

..., wherein the addressing information includes either a mobile telephone number, a session initiation protocol (SIP) address, or a combination thereof. This limitation is obvious in view of Fox for the reasons given for Ground 1, claim 6. Schmidt ¶165.

H. Claim 7

..., wherein the signaling is in compliance with a short messaging service (SMS), or a session initiation protocol (SIP): This limitation is obvious in view of Fox for the reasons given for Ground 1, claim 7. Schmidt ¶166.

I. Claim 10

1. 10.P (Preamble)

An apparatus comprising: To the extent the preamble is limiting, it is disclosed by Fox. Fox discloses this limitation for the reasons given for Ground 1, 10.P (Preamble). Schmidt ¶167.

2. Limitation 10.1

At least one processor: Fox discloses this limitation for the reasons given for Ground 1, limitation 10.1. Schmidt ¶168.

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3. Limitation 10.2

At least one memory including computer program code for one or more programs: Fox discloses this limitation for the reasons given for Ground 1, limitation 10.2. Schmidt ¶169.

4. Limitation 10.3

The at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to perform at least the following: Fox discloses this limitation for the reasons given for Ground 1, limitation 10.3. Schmidt ¶170.

5. Limitation 10.4

Interface, via a messaging gateway, a first network environment and a second network environment: Fox discloses this limitation for the reasons given for Ground 2, limitation 1.1. Schmidt ¶171.

6. Limitation 10.5

To receive, from the first network environment, content and addressing information associated with an apparatus associated within the second network environment: This limitation is obvious in view of Fox for the reasons given for Ground 2, limitation 1.2. Schmidt ¶172.

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7. Limitation 10.6

Wherein the content is reformatted in a vectorized format; and: Fox discloses this limitation for the reasons given for Ground 2, limitation 1.3. Schmidt ¶173.

8. Limitation 10.7

Determine to generate a signal specifying access information to access the content: Fox discloses this limitation for the reasons given for Ground 2, limitation 1.4. Schmidt ¶174.

J. Claim 11

..., determine to transmit the content to the apparatus in response to a request from the apparatus, the request being generated in response to the signaling: This limitation is obvious in view of Fox for the reasons given for Ground 2, claim 2. Schmidt ¶175.

K. Claim 12

..., wherein the content is in a scalable vector graphics (SVG) format: Fox discloses this limitation for the reasons given for Ground 2, claim 3. Schmidt ¶176.

L. Claim 13

..., determine to reformat the content into another vectorized format supported by the apparatus, for transmitting the reformatted content to the

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apparatus: This limitation is obvious in view of Fox for the reasons given for Ground 2, claim 4. Schmidt ¶177.

M. Claim 14

*An apparatus of claim 13, wherein the apparatus is further caused to:
receive either a text message, a source identification, or a combination thereof; and*

determine to append the reformatted content to the text message, the source identification, or the combination thereof, for transmission to the apparatus: This limitation is obvious in view of Fox for the reasons given for Ground 2, claim 5. Schmidt ¶178.

N. Claim 15

..., wherein the addressing information includes either a mobile telephone number, a session initiation protocol (SIP) address, or a combination thereof: This limitation is obvious in view of Fox for the reasons given for Ground 2, claim 6. Schmidt ¶179.

O. Claim 16

An apparatus according to claim 15, wherein the signaling is in compliance with a short messaging service (SMS), or a session initiation protocol (SIP): This limitation is obvious in view of Fox for the reasons given for Ground 2, claim 7. Schmidt ¶180.

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P. Claim 18

1. 18.P (Preamble)

A computer-readable storage medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following steps: To the extent the preamble is limiting, it is disclosed by Fox. Fox discloses this limitation for the reasons given for Ground 1, limitation 18.P (Preamble). Schmidt ¶181.

2. Limitation 18.1

Interfacing, via a messaging gateway, a first network environment and a second network environment: Fox discloses this limitation for the reasons given for Ground 2, limitation 1.1. Schmidt ¶182.

3. Limitation 18.2

To receive, from the first network environment, content and addressing information associated with an apparatus associated within the second network environment: This limitation is obvious in view of Fox for the reasons given for Ground 2, limitation 1.2. Schmidt ¶183.

4. Limitation 18.3

Wherein the content is reformatted in a vectorized format; and: Fox discloses this limitation for the reasons given for Ground 2, limitation 1.3. Schmidt ¶184.

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5. Limitation 18.4

Determining to generate a signal specifying access information to access the content: Fox discloses this limitation for the reasons given for Ground 2, limitation 1.4. Schmidt ¶185.

Q. Claim 19

..., determining to transmit the content to the apparatus in response to a request from the apparatus, the request being generated in response to the signaling: This limitation is obvious in view of Fox for the reasons given for Ground 2, claim 2. Schmidt ¶186.

R. Claim 20

..., wherein the content is in a scalable vector graphics (SVG) format: Fox discloses this limitation for the reasons given for Ground 2, claim 3. Schmidt ¶187.

XII. GROUND 3: CLAIMS 8, 9, AND 17 ARE OBVIOUS IN VIEW OF FOX AND THE JAVA MESSAGE SERVICE

A. Overview of Ground 3

Ground 3 builds on Ground 2, with the addition of the JMS reference for the “authentication” limitations of claims 8, 9, and 17. Thus, the analysis of claims 8, 9, and 17 is identical to the analysis as set forth in Ground 1. In particular, the JMS is cited for the “authentica[ing] the apparatus” limitations to render obvious that Fox’s PDA adaptor authenticates the mobile clients. A POSITA would have

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combined Fox with the JMS for at least the same reasons disclosed in connection with Ground 1. Schmidt ¶188.

B. Claim 8

..., determining to authenticate the apparatus based, at least in part, upon the addressing information of the apparatus.

This limitation is obvious in view of Fox and the JMS for the reasons given for Ground 1, claim 8. Schmidt ¶189.

C. Claim 9

A method of claim 8, wherein the apparatus is authenticated based, at least in part, upon an international mobile equipment identification code associated with the apparatus, a session authentication key transferred to the apparatus during the signaling, or a combination thereof.

This limitation is obvious in view of Fox and the JMS for the reasons given for Ground 1, claim 9. Schmidt ¶190.

D. Claim 17

..., determine to authenticate the apparatus based, at least in part, upon the addressing information of the apparatus: This limitation is obvious in view of Fox and the JMS for the reasons given for Ground 1, claim 17. Schmidt ¶191.

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XIII. CONCLUSION

For at least the foregoing reasons, this Petition should be instituted.

Respectfully submitted,

Date: December 23, 2021

/s/ James Glass

James Glass (Reg. No. 46729)

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CERTIFICATION UNDER 37 C.F.R. § 42.24

Under the provisions of 37 C.F.R. § 42.24, the undersigned hereby certifies that the word count for the foregoing Petition for *inter partes* review (excluding the table of contents, table of authorities, mandatory notices, certificate of service or word count, and appendix of exhibits or claim listing) totals 14,026 words, which is within the word limit allowed under 37 C.F.R. § 42.24(a)(i).

Date: December 23, 2021

/s/ James Glass

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e), 42.105(a), the undersigned hereby certifies service on the Patent Owner of a copy of this Petition and its respective exhibits at the official correspondence address for the attorney of record for the '411 patent as shown in USPTO PAIR via FedEx:

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Additionally, a copy of this Petition and its respective exhibits were served via FedEx to the following address:

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Courtesy copies were also sent via electronic mail to Patent Owner's counsel of record in the related district court proceeding, Case No. 6:20-cv-01164-ADA (W.D. Tex.) at the following addresses:

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